

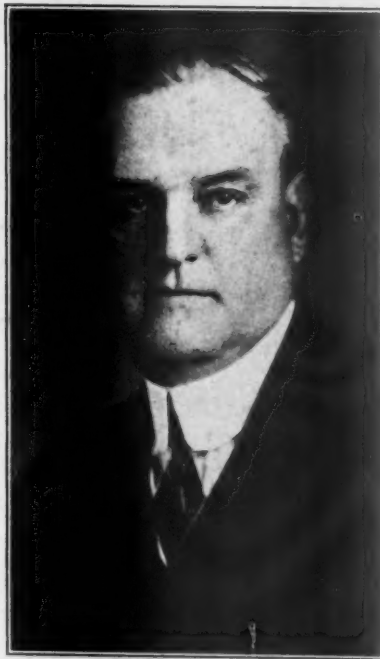
THE MINING CONGRESS JOURNAL

JULY, 1919

VOL. V

SAFETY—EFFICIENCY—CONSERVATION

No. 7



VAN. H. MANNING

Director of the Bureau of Mines, who has received an honorary degree of Doctor of Engineering from the University of Pittsburgh.

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WITH THE
AMERICAN EXPEDITIONARY FORCES

191

Dear Home Folks:-

..... But I can't go the
girls - no ser - there is almighty
homely that I almost cry for
pity every time I pass one.
How. is dad and hint is his
work at the Shovel Works? Tell
him we are using "Red Edge"
shovels here every day to help
win the war so you see he is
doing his part also I can event
a couple of hundred "Red Edge"
short handle square points every
time I go out on a job here
..... With my best love to
everyone
Frank

IT is our privilege to reproduce above a bit of another letter from "Over There." We regret we are not able to show the entire letter, for it is without exception one of the finest soldier's letters written to his Mother, Sisters and Father that it has ever been our pleasure to read.

Imagine the feelings of this boy 3500 miles from home, among strangers, find-

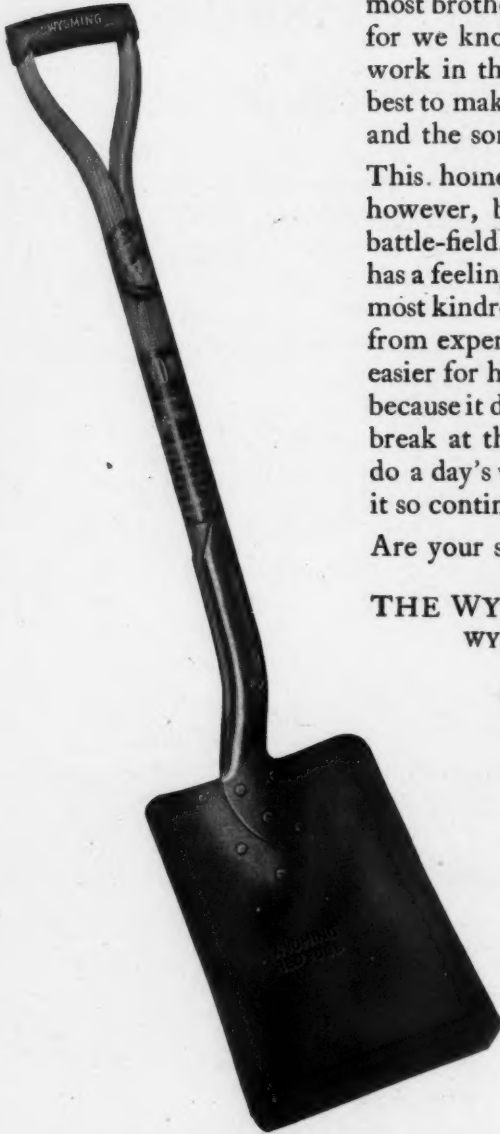
ing something so "homey" to him as Red Edge Shovels.

In them he sees his Father—the Dad referred to in the letter—who is the Superintendent of our Heat Treating Department. We can understand his almost brotherly affection for these shovels, for we know that while he is doing his work in the trenches, Dad is doing his best to make these tools worthy of his son and the sons of millions of other fathers.

This homey feeling for Red Edges is, however, by no means confined to the battle-field. Every user of a Red Edge has a feeling of affection for his Shovel almost kindred to Kirks, because he knows from experience that it makes his work easier for him; is in itself easier to handle because it does not rough at the edges, nor break at the corners, and permits him to do a day's work with less fatigue because it so continuously maintains its shape.

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	DATE June 15th, 1919.	
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THE MINING CONGRESS JOURNAL

JULY

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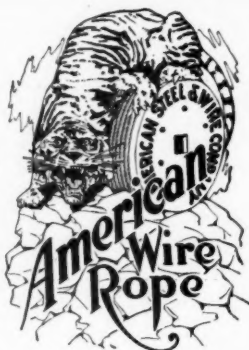
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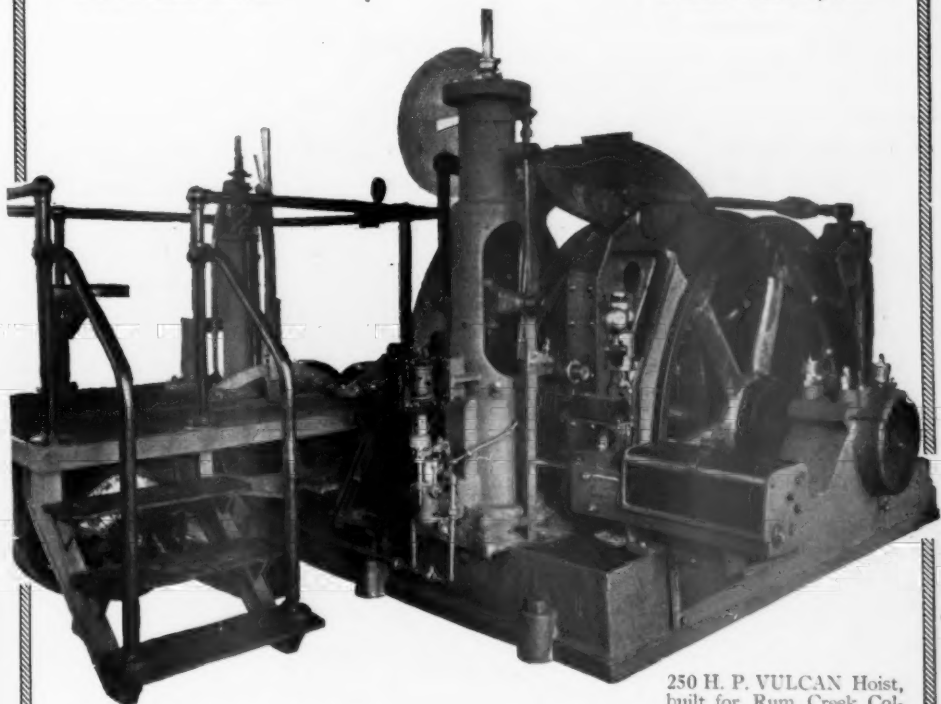
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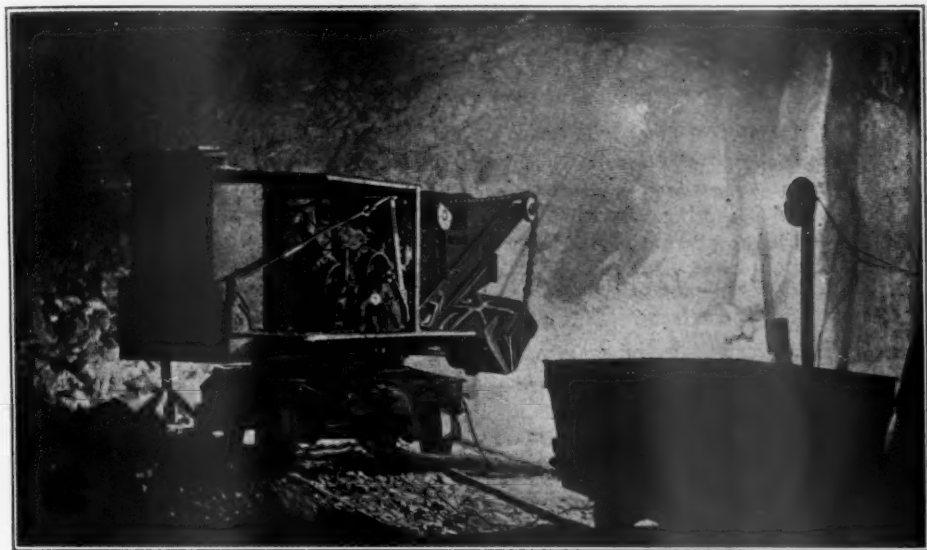
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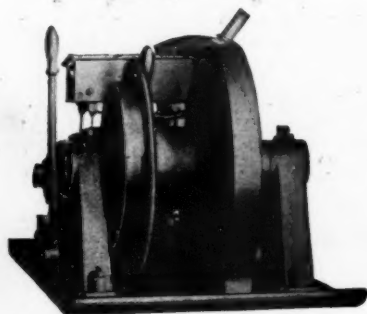


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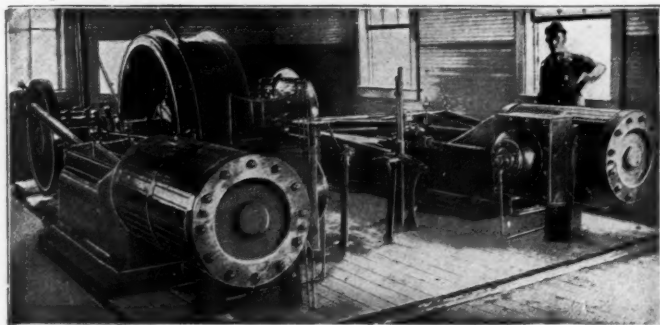
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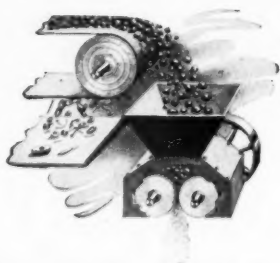
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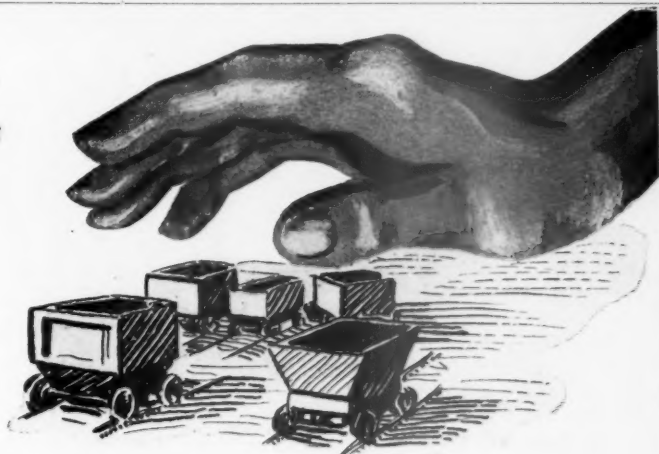
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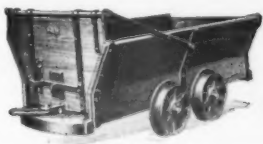
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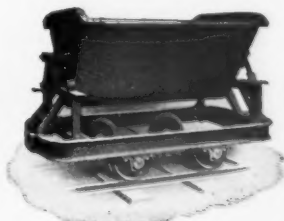
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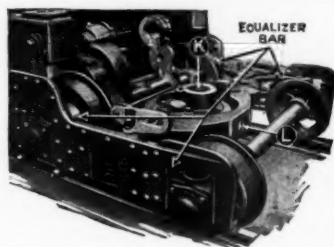
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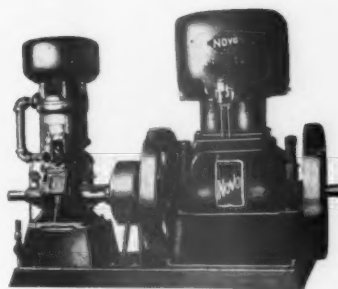
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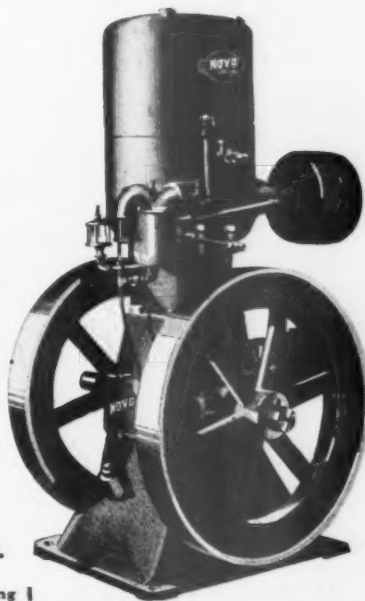
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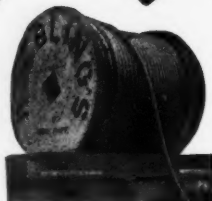
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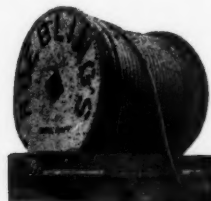
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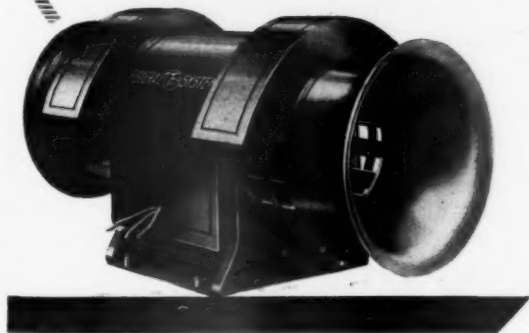
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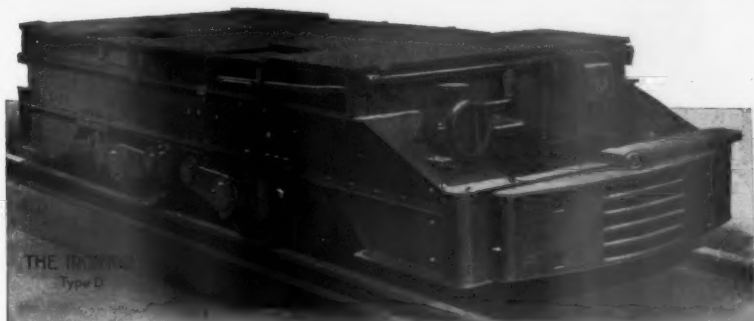
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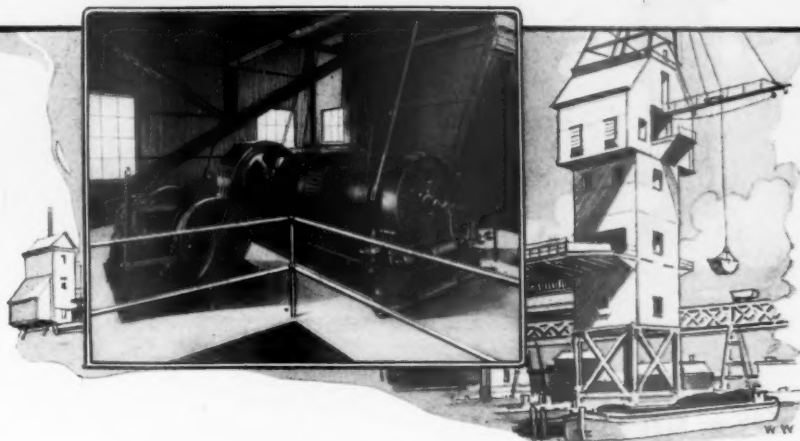
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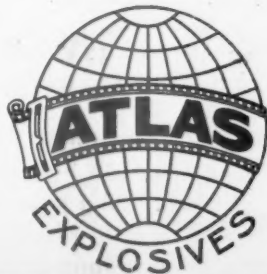
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AN IMPORTANT WORK

CONGRESS will likely be in session until the Spring of 1920

The American Mining Congress will have a hand in any legislation which affects the mining industry. Facts and figures will be presented to speed the passage of measures for the good of mining or to prevent the enactment of legislation detrimental to the industry.!

In the whole history of Congress there have been few dishonest legislators. Many a discriminatory and unjust law has been put on the statute books nevertheless. The reason is that busy members of Congress have not the time to digest the whole situation carefully. They are likely to assimilate it, however, if presented to them in tabloid form. This the **American Mining Congress** does.

Because of the activities of the **Mining Congress** it is improbable that any member of Congress, through ignorance of the miners' side of the question, will vote for a bill inimical to the industry.

The Mining Congress sees to it that every legislator has an opportunity to be fully informed before the vote is taken on any bill which affects the men responsible for the nation's mineral output.

HERCULES POWDER CO.



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Today we travel from New York to San Francisco in four days instead of four months. There is scarcely a town east of the Mississippi and few to the west of it that are not within convenient distance of a railroad station. The total mileage of our railroads would make a belt ten times around the world.

But without the power of explosives this great transportation system could never have been developed. Without dynamite we could not mine sufficient iron to make the rails and build the locomotives and cars, or enough coal to drive the trains that now move more than a million tons of freight each year.

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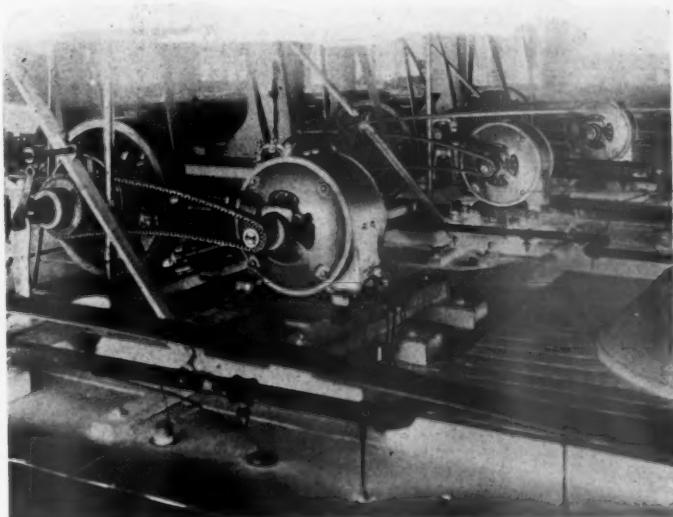
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THE MINING CONGRESS JOURNAL

Official Organ of the American Mining Congress

A DANGEROUS SCHEME

Price is the outward indication of value. If the value to the proposed purchaser is greater than the price, he buys, otherwise not. The value to him, not the cost, is the controlling reason which culminates in any transaction. If there are many customers and but one pair of shoes available and the necessity is great, then the value to the proposed purchaser will lead to the payment of a high price. If there are thousands of pairs of shoes available and but few customers, the value of the particular pair of shoes to the customer is reduced in proportion to the lack of demand and the surplus of supply. Again, this value to the purchaser is measured by the value of the money which he exchanges for a given article. The scarcity of this money, while a factor in the transaction, leads back to the value of the service or the quantity of the supplies which the individual surrenders for a given amount.

This apparent fluctuation in the value of money is purely relative. Money being more stable than any other factor in business transactions must be assumed to be stable. Prof. Irving Fisher, of Yale University, in an article recently appearing in the *New York Commercial*, quotes a part of the report of the Committee of the American Economic Association, the conclusion of which report is as follows:

The committee regards the stabilizing of the value of monetary units under international agreement as desirable and economically feasible. The details of the plan, the question of the proper time of its introduction, and the question whether international agreement is indispensable, should receive the immediate attention of statesmen and economists.

Incidentally it may be stated that the recommendation of the committee has by the common acceptance of the world, if not by international agreement, been in effect for many centuries. Gold has with practical universality been recognized by all peoples as a stable unit of value.

Professor Fisher says:

Now that the war is over there will surely arise great problems of currency. Among the chief of these will be the problem of more stable monetary units. If a scientific solution of this problem is not found, an unscientific solution is apt to be tried. Already schemes for currency changes are advanced which would be fraught with danger. . . . What is needed is to stabilize or standardize the dollar, just as we have already standardized the yardstick.

To accomplish this, Professor Fisher proposes that we—

banish gold entirely from our thoughts and think of a dollar as simply a number of grains of gold bullion in the Treasury vault, the number changing from time to time, but always definite and specific at any time. . . . But it will be asked: What rule or criterion is to guide the Government in making changes in the dollar's weight? A definite and simple criterion for the required adjustment is at hand—the "index number" of prices.

This plan for stabilizing the value of the dollar might be likened to a standardization of the yard-stick by making it of elastic rubber so that it might be made to adjust itself to the length of any article which it sought to measure. Plentiful crops or increased efficiency in production by which the supply of those articles, the average price of which is to be the index number, would increase the value of the dollar just as the yard-stick of elastic rubber might be made to adjust itself to the length of any article.

The law of supply and demand would attach itself to both sides of all transactions under the Fisher plan in such a way as to destroy itself. The world has produced many inventors of perpetual motion by which it was proposed to set aside the law of gravity. Professor Fisher's plan seems designed to set aside the law of supply and demand, and to that extent is a most unique proposal. A law which can be set aside is not a law. The law of gravity and the law of supply and demand will surely come back. To make useless mankind's universal yard-stick of value—gold—it will be necessary to change, to revolutionize, the viewpoint of the world, civilized and semi-civilized alike. It might be possible to convince an educated community that all exchange can be based on credit, but it will require many generations to convince the world that paper money is always and everywhere of equal value. The world might have agreed upon platinum as the best measure of value, but it did not. The world did agree upon gold as the most stable measure of value and will continue to so consider it without respect to the academic discussions of any or all of the world's theorists.

MINING CONGRESS JOURNAL thoroughly agrees with Professor Fisher when he says that "already schemes for currency changes are advanced which would be fraught with danger," although it may disagree as to which of these proposed schemes is most dangerous.

THE IMPORTANCE OF EXECUTIVE MANAGEMENT

It is unfortunate that the organized labor movement relies to some extent upon the essential doctrines of Bolshevism. The Bolshevik says the means of production belong to the people and private ownership is not entitled to respect. Organized labor says: "The property is yours, but the use of it must meet our approval. You may operate it with organized labor only. If you attempt its operation with non-union labor in defiance of our demands, we will not be responsible for what the irresponsible of our membership may do

looking to the enforcement of our demands." Organized labor, while not openly asserting that a union employee is entitled to his job, reaches the same result by ordering a strike whenever a union employee is discharged from service, practically always asserting, as an excuse, that affiliation with the union was the cause of the discharge from service.

Union members are never incompetent or insubordinate. Denial of the right to discharge for insubordination means loss of the benefits of executive management without which no operation can be efficient. Efficiency must be the key to our future progress as a nation. Even the farmer must be more efficient, and the agencies through which his product is distributed must be still more efficient if labor's wage is to be adequate. Any principle which prevents executive direction of operations leads to inefficiency, to high production costs, and to a scarcity of the necessities and luxuries of life.

The great body of consumers, including all wage-earners, must be burdened by any plan which destroys or impedes the efficient operation of productive forces. Interference with the right of executive control will prevent efficiency.

The principle of fair play is a predominant trait of American character. It consists largely in allowing to others every right or privilege which we ask or claim for ourselves. As American citizens we insist on the right to select and purchase our supplies in the most satisfactory market. Any interference with the principles of fair play is bound to react. The right of liberty and the right of property have so long been fundamental principles that every disturbance or denial is sure to disturb essential relations.

Every approach toward Bolshevism and the denial of these rights will develop inherent penalties.

CONGRESSIONAL INVESTIGATION NEEDED

One of the strange results of the work of the War Minerals Relief Commission was what developed in the effort to secure confidential and helpful information from

the records of the War Industries Board, the Shipping Board and other war organizations. The statements of hundreds of men who became involved financially through the activities of the various temporary war organizations have shown conclusively that communications, publications, circular letters and, in many cases, telegrams were sent out, at times specifically addressed to certain parties, in some instances sent broadcast in an effort to arouse general activity in production and at other times definitely instructing owners of properties to produce manganese, chrome, pyrites and tungsten for war purposes. In some instances veiled threats were made by government agencies that properties might be taken over and operated unless owners proceeded to get out the needed war supply.

And yet the efforts of the War Minerals Relief Commission to find substantiating records in order to complete their unbiased efforts to measure justice to the claimants met with failure. No records were to be found and no evidence that the war boards had ever participated in such activities or campaigns. One well-known official of the War Industries Board, whose activities were evidenced through the last few months of the war by both personal letters and telegrams and whose offices had sent out hundreds of form letters, announced that he had taken no part in the campaign to induce greater production of war materials, neither had his office, to his knowledge.

The Relief Commission and the claimants will probably always wonder what happened to the ponderously over-loaded and over-officious war board referred to, but the claimants will probably have longer memories than the officials who so easily shed their responsibilities after the signing of the armistice.

Blunders were to be expected—were impossible to avoid—in the scramble to whip the nation into shape for war, but that these temporary war organizations should, after overriding and ignoring the regularly organized administrative government agencies and attempting to control every function of national life, either fail to keep records of their ac-

tivities or perhaps permit their destruction, is quite unthinkable.

The information assembled by the war boards at government expense should be available for public use and any failure in this behalf is a proper subject for congressional investigation.

COMEDY AND TRAGEDY

Comedy and tragedy vie with each other in the mass of claims filed against the War Minerals Relief Commission. Curious and interesting are some of the strange claims which have floated in. The Commissioners will have to puzzle long over some of the stories presented in affidavits before finding a real connection between the claim and the law. Tears, honest old-fashioned tears, have been shed by the Commissioners over some of the really heart-breaking letters. Laughs, many of them, have broken the monotony of three months of grinding work and indignation over some of the frank attempts to get a little government money without visible excuse, legal, technical or otherwise, and have put spice into many an otherwise dull day.

A large number of claimants were automatically ruled out by virtue of the fact that they based their claims upon the manufacture of ferros, the Commission holding that the law does not cover the manufactured product. One claimant wanted to be repaid for horses, trucks and buildings purchased for the establishment of a transport service. Several claimants based their claims upon money or credit advanced to persons who were trying to follow the Government's request for war material and several have attempted to collect private accounts from claimants, through filing accounts with the Relief Commission.

As the law does not definitely state that the war production must have been "in the United States" several Cuban claims have been filed, the entire records and all correspondence being in Spanish. One man who claimed \$24,000 losses explained that he "had kept no books" and that the Commission would have to accept his memory for the correctness of the claim.

Perhaps the most unique claim was made by the City of San Jose, California, which had sacrificed its local scenery to the god of war and wanted to be paid for it. Ten thousand dollars was the value fixed on the lost scenery, and the story is about as follows:

San Jose City Park contained a great boulder all shiny and beautiful from some sort of metallic content. Everyone was proud of the big mass of metal, and the megaphone man in the tourist wagon had it on his program as a "sight."

One day a patriotic citizen read of the need of more manganese for the big guns. He recalled that someone had said the big rock was manganese. He told the "City Fathers" that San Jose had a duty to perform to the soldiers in France. They agreed. An engineer estimated that the rock was worth \$10,000 at the "war price" for manganese. The money value was weighed against the scenery value and won. There was a great moment in San Jose when the official blast was set off that put San Jose on the map as a mining town. It was a public event when the crumbled scenery was loaded for market and started for the East, and then, before San Jose's contribution to the war could get into the market, came the armistice. All the King's Horses cannot pull the "scenery" into position again, but it will take \$10,000 to assuage the feelings of the little California city for its failure.

A DIRECTOR OF PUBLIC CONSTRUCTION

Among others who want to help care for the demobilized soldiers and sailors, Congressman Kelly of Pennsylvania makes the most remarkable proposal yet placed before Congress. The bill is outlined in the Legislative Department of this issue. One hundred million dollars are placed in the hands of a Director of Public Construction whose powers are so broad and ultimate influence so great that existing portfolios dwindle into insignificance except in the matter of salary. Mr. Kelly limits his proposed new controller to \$5,000 per year. He provides for the employment of soldiers

and war workers in building and maintaining public highways and "post roads," in establishing and operating motor transport and postal routes under the Post Office Department, in organizing a system of marketing food products, etc. The Director of Public Construction is empowered to act as a real estate agent for discarded public lands, to dabble in the work of the Department of Agriculture by establishing ideal communistic rural settlements and experiment farms, and to break into the State Agricultural College field with demonstration farms for "agricultural training." The communistic settlement plan authorizes operative, buying, selling, storage, insurance, credit and loan boards and other "suitable means for the settlers' economic and social welfare." He is authorized to establish experimental logging and milling plants and to sell the products. He is authorized to go to Alaska and operate a few "community plan" coal mines. He is to assist in the control of floods, etc., etc. And, while his controlling board is composed of the Secretaries of War, Agriculture, Interior and Labor and the Postmaster General, all wages and standards of living conditions for labor employed are to be fixed by the Secretary of Labor.

And for \$5,000 of American money, Mr. Kelly plans to employ this road-market real estate colonization agricultural forestry mining economic expert for twelve months' efficient service each calendar year.

DEPARTMENT OF PUBLIC WORKS

The most far-reaching and significant bill yet aimed at the "reconstruction" of National Administration has been introduced in the Senate by Senator Jones of Washington and in the House by Congressman Reavis of Nebraska.

This bill is the outcome of months of consideration and planning by the Engineering Council of America, representing the various engineering societies of the United States and organized to participate in national legislative activities affecting engineering.

The Bill eliminates the present De-

partment of the Interior and establishes, in its stead, a Department of Public Works. It provides that the secretary of this new department shall be a member of the President's cabinet, but that after the tenure of office of the incumbent expires "all subsequent occupants shall, by training and experience, be qualified to administer the affairs of the department and to evaluate the technical principles and operations involved in the work thereof."

The bill provides that the Geological Survey and Bureau of Mines shall remain in the Department of Public Works, with their personnel and property, but transfers—

The Patent Office to the Department of Commerce.

The Bureau of Pensions to the Department of the Treasury.

The Bureau of Education to the Department of Labor.

The Bureau of Indian Affairs and the Indian Commissioners to the Department of Labor, except that all engineering and construction work of these two bureaus must be done by the Department of Works.

St. Elizabeths Hospital and Freedmans Hospital to the Department of the Treasury.

The Columbia Institution for the Deaf and Howard University to the Bureau of Education.

To complete proposed control of engineering and construction, the following bureaus are transferred to the Department of Public Works:

Supervising Architect, from the Treasury.

The Construction Division of the United States Army, River and Harbor Improvements, Mississippi River Commission and the California Debris Commission, from the War Department—with provision for assignment of army officers in the work.

The Coast and Geodetic Survey and the Bureau of Standards from the Department of Commerce.

The Bureau of Public Roads from the Department of Agriculture.

The Forestry Service from the Department of Agriculture.

Four assistant secretaries are authorized under civil service and these must be technical men.

For the bill, there will be aligned many thousands of engineers and technical men. Against it will be aligned the Administration forces and the Army and the Navy, for it is openly said by friends of the bill that it is aimed directly at the War Department and is a sort of punitive measure designed to inject a more technical and business method into the construction work of the Government, to replace military red tape.

Against it, also, will be arraigned those who believe that the Department of Labor already has sufficient to handle in looking after employment and labor problems.

There will be arraigned against it the hundreds of thousands who believe that there should be a department, rather than a Bureau of Education under any department. They will fight for the Educational Bill already introduced.

There will be a strong objection from those who question the ability of technically trained engineers to handle the entire construction-program of the country—and technicians are to be in control of all bureaus if the bill becomes a law.

The long-cherished plan of the American Mining Congress for a Department of Mines and Mining, to include the Bureau of Mines and Geological Survey, is still a live issue. If this is the proper time for a program of reorganization, the mining interests of the country will undoubtedly insist on being considered.

BOLSHEVITIS

Bolshevitis is a new disease. A returned officer of the Medical Corps of the army, until recently stationed in Hungary, says that the Hungarian bolshevitis was cured by the administration of plenty of good food. In studying the activities of the "Reds" in Budapest he found the symptoms similar to the actions of hungry animals. He used the methods he would have used with hungry animals and cured the patients.

In the United States it was a parlor disease for a long time and might have been cured in its incipient state by radi-

cal treatment, such as the enforced use of common-sense methods of thinking. In Russia the lead cure has been successfully used by the allied physicians, but the epidemic is hard to handle in its virulent form. The germs of the Russian epidemic were brought over in sugar-coated pills and distribution begun by "Ambassador" Martens, the repudiated representative of the "Soviet Government" of Russia, who, when turned away from Washington, went to New York, established a mahogany furnished office with plenty of stenographic appurtenances and began to emulate his illustrious predecessor, Herr Von Bernstorff, in the Hunning business.

The people of New York, as represented by the Lusk Investigation Committee, are cleaning house. The nest of bolshevitis generators was discovered, seized, cleansed of several tons of Lenine and Trotsky literature in several languages, records and correspondence seized showing how far the parlor bolshevitis had developed and the real epidemic established, and several disconcerting disclosures and much good reading became the property of the authorities. The process of cleaning-up reached the headquarters of that famous fraternity of wheat-burners, the I-Won't-Works, and a ton more of the Russian romance was seized. And the committee even interfered with a well known "School of Social Science" which, Senator Lusk's committee alleges, has been disseminating the doctrine of discontent for many years.

The investigating committee of the United States Senate filled more than 2,000 pages with a report of the development of the disease in the United States and warned the nation that the plan of the propagandists was to seize all property, public and private, and to do away with the Government. An appropriation of two million dollars was made by the Senate to be expended in fighting the "Reds."

MINING CONGRESS JOURNAL for June quoted a soldier who claimed that the slimy disease was to be found in the Army and was to be feared more than foreign invasion. The New York disclosures and the Senate report indicate that the soldier was correct.

"Ambassador" Martens is quite indig-

nant at being disturbed in his work of inoculating the American people with the Bolshevitis virus, but it is probable that his work will have to be carried on by other enthusiasts as he will be "segregated" from decent Americans for some time. The disease is here, however, and it doesn't seem to confine its ravages to the empty stomach; therefore the army officer's suggested cure won't apply in America.

WAR DEPARTMENT HAS LARGE SUPPLY OF CUPRO-NICKEL FOR SALE

The War Department, through the Director of Sales, is making inquiries designed to develop a market, other than that afforded by the United States Mint, for approximately seventy-five carloads of cupro-nickel, the material from which the 5-cent piece included in the nation's monetary system is coined.

This material was acquired by the War Department to be used in the making of the metal jackets that encase the .30-caliber bullets, and other small-arms ammunition. The alloy obtained for military purposes has a slightly higher copper content than that used for coinage. It consists of 85 per cent copper and 15 per cent nickel. Cupro-nickel is stronger than brass, and, notwithstanding the presence of copper in its composition, takes and maintains through long usage a natural nickel finish.

Experiments have demonstrated that this alloy has an advantage over nickel-plated brass in that it holds its nickel finish longer. Therefore, the Office of the Director of Sales is calling it to the attention of the manufacturers of automobile accessories, cutlery, builders hardware, jewelry, pipe fittings, and other nickel-plated commodities, and inviting suggestions from them as to new uses to which the metal may be put.

The present surplus of cupro-nickel held by the War Department consists of the following quantities:

- 68 tons cupro-nickel bars (for rolling or for casting).
- 598 tons cupro-nickel sheets (from which the jackets are extruded).
- 805 tons cupro-nickel sheets in coils.
- 623 tons partly finished bullet jackets.
- 356 tons cupro-nickel scrap resulting from operations.
- 10 tons finished jackets.

The sheets and coils are adaptable for use by stamping mills. The bars, partly finished jackets and finished jackets are suitable for casting.

Shipments of Coal

The War Trade Board announced on June 27 that shipments of coal may now be made from all ports on the Atlantic seaboard, and that the Collectors of Customs have been notified to disregard the provision contained in export licenses already issued to the effect that shipment must be made from Philadelphia or ports south thereof.

EMERGENCY TARIFF HEARINGS

At the beginning of this session of Congress, tariff bills, covering practically all of the more important war minerals, were introduced by the various representatives from the states most interested. These bills have all been reviewed in detail in the columns of this journal devoted to legislation. Almost the first of these was Senator Henderson's Potash License Bill, which failed with the closing of the last session of Congress. A similar bill was introduced in the House by Mr. Fordney, Chairman of the Ways and Means Committee, and was the first of these bills to have a hearing before the committee. The Ways and Means Committee for this session of Congress is made up of the following members:

Republicans.—Joseph W. Fordney, Chairman, Michigan; J. Hampton Moore, Pennsylvania; William R. Green, Iowa; Nicholas Longworth, Ohio; Willis C. Hawley, Oregon; Allen T. Treadway, Massachusetts; Ira C. Copley, Illinois; Luther W. Mott, New York; George M. Young, North Dakota; James A. Frear, Wisconsin; John Q. Tilson, Connecticut; Isaac Bacharach, New Jersey; Lindley H. Hadley, Washington; Charles B. Timberlake, Colorado; George M. Bowers, West Virginia.

Democrats.—Claude Kitchin, North Carolina; Henry T. Rainey, Illinois; Cordell Hull, Tennessee; John N. Garner, Texas; James W. Collier, Mississippi; Clement C. Dickinson, Missouri; William A. Oldfield, Arkansas; Charles R. Crisp, Georgia; John F. Carew, New York; Witmell P. Martin, Louisiana.

Republicans are, of course, in favor of tariff, but the Democratic members of the committee express themselves as favoring adequate protection for the war minerals as a measure of national defense, and to save infant and necessary industries from ruin.

The main interest of the first two days of the potash hearing, June 10 and 11, centered about former German control and the relative merits of a licensing or general tariff plan, and the possibility of building up a permanent potash industry in this country in a short time under a system of protection. The following witnesses appeared:

Frederick W. Brown, Executive Secretary, United States Potash Producers' Association.

H. H. Dow, President of the Dow Chemical Co., Midland, Mich.

Lewis Emery, Jr., representing the American Alkali & Chemical Co., Bradford, Pa.

Arthur C. Harragin, Secretary, American Trona Corporation of California.

Col. Myron M. Parker, Attorney for the United States Potash Producers' Association.

George D. Parkinson, representing the Liberty Potash Co., of Salt Lake City, Utah.

W. E. Richardson, representing the Nebraska Potash Producers.

Dr. George Otis Smith, Director, United States Geological Survey.

A. G. White, Bureau of Mines.

On June 17, Dr. H. A. Huston, Secretary of the German Kali Works, a subsidiary of The Potash Syndicate of Germany, appeared before the Ways and Means Committee with a carefully prepared statement and concluded in a spirited argument with Colonel Parker, who pointed out the real status of the German potash industry in the minds of the American people.

Tungsten was the first metalliferous industry to be discussed before the Ways and Means Committee, under a bill sponsored by Congressman Timberlake, a member of the committee, who opened the discussion on behalf of the tungsten producers by reading a number of telegrams from the tungsten producers of the Boulder District of Colorado and California. J. H. Holmes, Jr., of Boulder, appeared for the tungsten producers, George Otis Smith and Frank R. Hess for the Geological Survey, Roy McKenna of the Vanadium Alloys Company appeared for the manufacturers of alloy steels, and George H. Bailey for the American Mining Congress. G. C. Riddell gave an interesting report of the findings of the Tariff Commission regarding the tungsten industry. Congressman John Q. Tilson from Connecticut, a member of the committee, spoke for the users of tungsten steel tools. The interesting part of this whole hearing was the fact that the entire industry, from the tungsten miner to the user of the finished product of tungsten tool steel, all spoke through representatives to the Ways and Means Committee and all were in favor of a tariff on tungsten and tungsten products. Mr. Tilson made the statement that the machine shops of the district that he represented must have this tungsten tool steel and that he was speaking for them when he said that they wanted the means of protection that would guarantee them the most uniform, steady supply. The impression this hearing made on the committee was distinctly favorable.

Magnesite hearings commenced on June 16 and continued for two days. Congressman Hadley, who had presented the bill, opened with a short discussion of the growth of the industry. Senator Poindexter of Washington also spoke in behalf of the bill. Mr. G. C. Riddell appeared for the Tariff Commission and gave the results of their examinations of the magnesite industry. Congressman Kahn of California appeared for a few moments in behalf of the bill. George Otis Smith appeared for the Geological Survey.

Considerable diversion was caused by the testimony of Mr. E. M. Allen, vice-president of The American Refractories Company, who appeared in opposition to the magnesite tariff, basing his contention upon the fact that his company had invested \$2,000,000 in Austrian magnesite plants before the war. Mr. Allen averred that there had been "considerable guessing" in connection with other statements made before the committee and charged that the American interests had been pooled and

that there was now a trust in control. He alleged that the tariff, if granted, would be "in the interest of about three California men" and when faced with a statement by Chairman Fordney that he understood that there were 8,000 stockholders in the American magnesite industry, Mr. Allen replied that this was the result of a "great stock jobbing scheme."

It had been charged that Austrian labor was paid at the rate of twenty cents per day, and Mr. Allen said that his company had paid \$1.10 for ten hours' work, but that Austrian labor cost had increased since the war closed.

"We used to sell this stuff at \$15.75 before the war," said Mr. Allen, "but it will cost us \$30 a ton to lay it down in New York or Philadelphia. Our company is 100 per cent American," he said; "American money owns the mines and \$2,000,000 is invested."

"Leaving out of consideration the proposition of the American Refractories Company, isn't it the better policy to manufacture brick of American magnesite, produced by American mines by American labor than from Austrian mines?" asked Congressman Hadley.

"That is an economic question that your economists can answer, but I will say this, that since the war is over we have got to realize that we cannot live within ourselves; we have got to become an international country," was the answer of Mr. Allen.

He also thought that the \$25 per ton tariff asked for would be injurious to the Canadian magnesite industry which was "started to help out the situation."

"Whom did they go into business to help—Canada or the United States?" asked the chairman.

"I suppose, Canada primarily," replied the witness.

Mr. Allen had several heated tilts with various quizzical members of the committee who attempted to make him elucidate upon several quite general statements regarding "trusts," "independent" manufacturers of magnesite bricks, and other expressions which caused either amusement or belligerency on the part of the committeemen. He held that the new duty, as asked, should not be fixed and that the present ad valorem duty of 10 per cent should be reduced to 5 per cent.

Messrs. B. L. Thane and Roy N. Bishop appeared for the Northwest Magnesite Company and Howard T. Wierum for the American Mineral Production Company. A great deal of discussion arose as to the relative merits of American and Austrian magnesite. The evidence seemed to show that, from the most recent developments, American magnesite is fully as good as Austrian and, with proper protection for a fair period of time, this industry can be self-sustaining on a permanent basis. Judge Webster, Representative from Washington, closed the hearing for the magnesite industry with the most telling and effective speech which has been given before the Ways and Means Committee this session. He was preceded by Mr. Ryan, counsel for the American Refractories Company.

On June 18, the Zinc Tariff bill was called up and one hour was allotted to the Joplin Committee for presentation of their arguments. Paul A. Ewart, a mining attorney of Joplin, addressed the committee for fifty-five minutes, discussing the zinc situation in a general way. Otto Ruhl, well-known mining engineer, representing the Chambers of Commerce of Joplin and Webb City, was given five minutes and afterwards filed data in support of his statements. Congressman E. B. Howard of Oklahoma appealed for the passage of the bill and related Oklahoma's interest in the zinc industry.

Two days were given to a discussion of chemical glass and the committee adjourned until after July 4.

Potash Situation Summarized

In opening the potash hearing before the Committee on Ways and Means of the House of Representatives, Geo. Otis Smith, the director of the U. S. Geological Survey, said:

"I think it only necessary for me to summarize the situation which the United States faced at the beginning of the world war. We had depended almost to the extent of 100 per cent upon the great potash resources of Germany, the largest in the world. We were without domestic production. However, for some years previous to that, if you will remember, there had been before the great war somewhat of a commercial conflict on the subject of potash, and Congress in 1911 authorized the beginning of a search for domestic sources in this country. So the question was already before the governmental departments eight years ago and before the American people, though in a small way.

"The principal potash resources that have been discovered, partly under this governmental stimulation and largely through the work of the citizens of the United States, are possibly four: The brines of the small lakes in western Nebraska, the alunite deposits in Utah, the kelp deposits along the Pacific coast, the brines of Searles Lake in California, and attention was being given to all these.

"The net result of this activity was that last year, 1918, there was produced in the United States something like 50,000 tons, in terms of K_2O , of potash salts. This would represent approximately 20 per cent of the pre-war requirements of the United States. The capacity as estimated by those who studied the question—the capacity of the different plants operating or ready to operate at the time of the signing of the armistice—was about 100,000 tons, which would be, you see, about 40 per cent of the pre-war consumptive needs of the United States.

"In point of active production the Nebraska Lakes led last year with a production of nearly 29,000 tons a year, in terms of K_2O , and Searles Lake with a production of nearly 11,000 tons.

"Then we had as by-product sources—and that is a subject you will find discussed in the previous hearings—potash recovered from cement mills and blast furnaces, molasses distillery waste, beet sugar waste, and even such waste

liquors as come from wool washing; the total of this by-product potash being something like 6,000 tons—and then there was another 2,600 tons from alunite, and 4,800 tons from kelp; a total, as I said, of something like 50,000 tons, or to be more exact, 54,562 tons, in terms K_2O , that represents in addition to the domestic potash industry."

TUNGSTEN PRODUCTION

ANALYZED BY F. L. HESS

During the hearing on tungsten before the Ways and Means Committee, Representative Garner asked F. L. Hess the following question:

"I would like to ask you to tell the committee something about the ultimate extent of tungsten already discovered in this and foreign countries, and the probable cost of production in this country and in foreign countries, as you understand it."

To this question Mr. Hess replied:

"In this country we have three principal fields: the Atolia field of southern California, which is practically confined to one mine, the mine of the Atolia Mining Co. There are a number of smaller veins and some placer deposits, which are located in the one little village of Atolia. This Atolia Mining Co. mine produces a mineral known as sheelite, and that is the richest tungsten mine ever discovered in the world. That was discovered about 1905; or in that year, at any rate, the Atolia Mining Co. took it over. I think it was found the year before. They had, in the first place, in the Hope Pass vein, a vein which was 3 feet of solid sheelite. Sheelite contains about 80 per cent WO_3 , or 80 units to the ton. Just at the time the war came on, or after the war got going ahead and tungsten got up to the highest price, in one of the veins, Union No. 1, they had a vein that carried 9 feet of rich ore, and they sold that ore at the very highest prices; so that that is one of the very prosperous companies. That mine produces somewhere in the neighborhood of one-third of the total production in the United States.

"The second field, in Nevada, has been a comparatively recent addition, and is a totally different type of tungsten ore. There granite has been thrown up in the limestone, and with the ores that came up with the granite a little tungsten was brought, and this has deposited in the limestone and changed the character of the limestone altogether, and it looks nothing at all like limestone. And there is this little thin deposit of tungsten in the limestone. It may be a foot broad and from 3 feet to 1,000 feet long, or half a mile long, as it is in one case, and a few feet broad, and varying all the way. There is no steadiness to the amount of the deposit. They had gotten into full production, that is, they had gotten into much larger production, about the time the war closed. They produced something like 800 tons of ore last year, or a little less than that.

"The third field is the Boulder field, in Boulder County, Colo. There they have a series of small veins which widen out into little rooms or

pockets. And that field and Atolia have been teetering back and forth, as to which was the larger, for the past few years—as to which made the larger production. Recently the Boulder field has been making the larger production. But many of those mines are cleaned up, and many of the deposits are completely depleted. The Primos Chemical Co., which was one of the largest mining companies there until last year, has dismantled its mines and actually gone out of business.

"You wanted to know something about the deposits in other countries?

"The largest producer outside of the United States is China. Tungsten ore was found in China in 1917; that is, the first production that amounted to anything. They produced about 1,500 tons of ore. In 1918 they shipped something like 10,500 tons. The ore is similar to the piece we had here yesterday. It is found as placer stuff, where the veins have worn down so the material in the veins has been washed away, leaving this wolframite in the dirt and stream beds. I have talked with a number of people who have been in those fields and imported from them, and they tell me as fast as a deposit was found the people would flock there from all over the country, farmers and all, and begin mining this deposit, and in some places they were very rich. I remember a story of half a dozen coolies who found a deposit on ——— island, across from Hongkong, and they took out \$30,000 worth of ore in a few weeks. What there is left of those deposits, nobody knows; that is, nobody of any responsibility that I know of knows. There have been very few white men I know of who know anything about tungsten mining in China, and we have no reports that are reliable of how much is left; but I am quite sure there is going to be a lot of ore come out of there yet, because they have not gotten down to mining the veins.

"In Burma they are mining both veins and placer deposits. As you know, Burma is under the British Government, and their costs have been very low. They have had a lot of rich deposits. The Hermering mine has published a cost of less than 9 shillings per unit. That would bring it down, as I remember, counting the exchange and all, to something like \$1.56 a unit. The Mergui mine is in south Burma, and the Hermering mine is in northern Burma, 90 miles from a railroad, and they can lay down tungsten ores in London at \$7 a unit, at a profit. I have that information from a consulting mining engineer here and I am sure it is correct.

"Now, you can get all sorts of prices between those, in all those countries.

"Bolivia is perhaps the third largest producer. The mines there are not quite so confined to the tin mines as some think, but there are many tungsten veins which are mined solely for the tungsten. And these have been taken up by men of all nationalities, and especially by the Germans and English. The Germans have been in there for a long while, but the English make a special effort to get hold of all such mines, of course, because they expect to make that the basis of foreign trade, and they own some of

the very best mines there which do produce both tungsten and tin, and they also have, as by-products, copper and bismuth. Their production will still grow, but it is not altogether cheap mining, by any means.

"Portugal is the next largest producer, the largest producing country in either Europe or Africa. The Portuguese mines can probably produce from 2,000 to 3,000 tons, if properly worked, per year. When I speak of tons here I mean a ton of ore which carries 60 per cent WO₃, the standard tungsten ore."

COST OF PRODUCING TUNGSTEN IN COLORADO PLACED AT \$17

During the tungsten hearing J. H. Holmes, Jr., of Boulder, Colo., secretary of the Tungsten Products Co., engaged in the following colloquy with Representative Garner:

"MR. HOLMES. Under normal conditions with the wage existing as in the past we could produce a fair amount of ore in our district—that is, sufficient average amount—at anywhere from \$16 to \$17 per unit.

"MR. GARNER. You said that before the war your average cost of production was \$11 to \$12 per unit. If the wage scale now is the same as it was prior to the war, why does it cost you \$500 or \$600 a ton more to produce it?

"MR. HOLMES. The reason is, Congressman Garner, that, when the war came on, what little ore we had developed—what actual ore was developed and blocked out—was gutted out of the properties. Very little systematic development for the opening up of new ore bodies was maintained. The pressure for production during the war was so great that ore, as soon as disclosed, was taken out of the mines. Now, in a mine you have to do a considerable amount of dead work—that is, work in barren ground which does not produce ore—in order to open up new ore bodies, and the deeper you get into the ground the more costly becomes your mining. The situation, then, which faces us today is that our mines are practically exhausted of quickly accessible ore, and we shall have to develop and open up new ore bodies, and the cost of that work can only be estimated. If we take the experience during the war as our basis for figures, I should say that an estimate, an average fair estimate, for the cost of producing ore in our deeper mining operations of our particular district from now on cannot be less than \$17 or \$18 per unit.

"MR. GARNER. What was the tariff on tungsten in 1911, 1912, and 1913?

"THE CHAIRMAN. Twenty-five per cent if valued at less than \$200 a ton and 20 per cent if valued at more than \$200 a ton was the duty under the Payne tariff law.

"MR. GARNER. Well, now, under that law you increased your production in this country.

"MR. HOLMES. Our production was increased very slightly under that law, Mr. Garner."

This led Geo. Otis Smith to say:

"When we are speaking of the variation in costs between American mines and foreign mines, in addition to making the point already

referred to by Mr. Holmes that there is a variation of costs even in our own country—and of course we know there is a variation not simply in mines but even in farm products—there is also a distinction, I believe, that ought to be made between labor costs and wages. The foreign labor has a low wage, but it seems to me it has a low productivity, and it is not enough to simply compare wages in Burma and Colorado; we must also have some idea of the productivity of those two classes of labor. I was looking at some figures that have been offered by Mr. Hess as to Burma, and as I compared the annual output of tungsten ore with the number of laborers employed during the year I found that they only produced one-third to one-half of a ton per year, and I believe that the corresponding figure for output per man—and I will emphasize the "man" in the case of Colorado, because 10 per cent of that kind of labor in Burma were women and children—but the output per man in the United States would probably be from 3 to 5 tons."

BAILEY'S TESTIMONY

George H. Bailey, of the American Mining Congress, said in part:

"I only want to give some facts and considerations, if I can, that will be worth your while in relation to this matter. I am not so pessimistic as Mr. Hess. You are aware that the department which Mr. Hess is in is not the department that discovers the mines. The prospector is the one who discovers the mines, and there have been many times when the department might have made the statements he made this morning in regard to copper and some other metals, and they would have been wholly within the facts and records and the knowledge they had at the time; but the facts are that when the market went up and tungsten became in demand and there was a necessity for it, the price induced the prospector to find it, and he found it. When a condition exists that causes something to be found there is always somebody who will find it.

"There are many low-grade deposits of tungsten in this country. The Bishop field in California is said to have almost unlimited quantities at \$16. It is found in 13 States and in Alaska. The combing that could be done in 18 months or 2 years cannot be taken into consideration in a final judgment as to the amount of tungsten in this country. The other day one of the largest operators in the Boulder field said in the office of the Mining Congress in the Munsey Building that if the metal was protected they would immediately place plants in fields that they had discovered in Nevada and increase the product from that field. As to the Boulder field, I want to refer to the conditions which Mr. Garner has been asking questions about in regard to prewar conditions and the prewar price. These American mines producing tungsten cannot be put back to the prewar condition to bring upon the market the prewar prices, or to supply them at the prices for which they were supplying them at that time. As Mr. Hess says, there was a time when Boulder

was supplying \$1.50 tungsten. You have been told how the mine is now and how they have to follow the veins, and yet they have not found the limit of those small veins in Boulder. A man making such an investigation as Mr. Hess makes goes down in the mine and sees what is in sight, jots it down, and makes his report. They do not look beyond that; it is the fellow who has the nerve, the mining engineer, who gets money enough to back his judgment, that goes and makes further discoveries."

Roy C. McKenna, of Pittsburgh, pointed out that:

"The manufacture of ferrotungsten prior to 1914 in the United States was practically nothing. It is a fact that Germany was importing America tungsten ore, and, at the same time, exporting to America the refined product. It was only war coming along that enabled the metallurgists of America to find out improvements and processes for the manufacturing of ferrotungsten, so that today I believe we can compete with any nation in the world.

"This bill of Congressman Timberlake's is not asking for additional protection on ferrotungsten; it is asking only for protection to offset the protection being asked for tungsten ore.

"The point that makes it absolutely necessary that the tariff be per unit and not ad valorem is the fact that the American ores produced in this country generally come from nonmineral lands. They are pure ores, the highest grade of ores. The ores we get from Burma and China, especially China, being surface ores, are better; but as soon as they dig deep they have 5 to 6 per cent tin and other impurities. There is a big penalty against the ores containing those impurities, because it is difficult for the manufacturer to eliminate the tin and copper and bismuth; and the trouble with any tariff on ad valorem would be that those lowest grades of impure ores would be imported on the Chinese value, that would not be over \$3 to \$4 a ton on the low-grade ores, and they would compete against the high-grade American ores in the end.

"The tungsten imports of ore into the United States prior to 1914 was in the form of ferrotungsten and tungsten powder. The tungsten mines of South America were owned practically by Germans and some by Great Britain; they were practically dominated by Germany. Germany was the trading center on tungsten ore to the whole world. The tungsten ore was shipped from South America to Germany, refined into ferrotungsten and tungsten powder and then exported to Great Britain and to the United States. The tungsten that was produced in the English colonies was exported to Germany, reduced to ferrotungsten and shipped to Sheffield for the manufacture of high-speed steel. Germany made practically no high-speed steel; they were a small user of high-speed steel, but they did monopolize the refining of tungsten ore. America was exporting tungsten ore to Germany and importing ferrotungsten at the same time.

"In the market fluctuations of tungsten ores in the last three years, there have been two points where the level price has maintained itself.

One was at \$17 and the other was \$26. Between that, the variations were rapid; but it would settle down at \$17, which represented the price at which the tungsten operators would sell under the most adverse circumstances; \$26, based on market conditions, represented the point where the production would be increased and the law of supply and demand would cause the market to drop again.

"I want you to understand there is a difference in tungsten mining between two veins that run within 50 yards of each other. The one vein may have tungsten that you can get out at one-half the price per unit it would cost in the other vein. The tungsten vein—we had a specimen here of farberite ore, a Colorado ore, here yesterday. That showed the vein not over six inches wide. There was about an inch of mineralized substance in that piece. It represented to my mind the average tungsten vein that is being mined in Colorado, as nearly as any specimen I ever saw. To dig that out it is necessary for two men to work in that tunnel. It is necessary for them to have a car and to load and unload there. It has to be at least seven feet high, so a man can work standing up, and it has to be wide enough so that two men can pass each other and work together. Now they have to remove it sometimes 200, sometimes 8, and sometimes almost from 1,000 feet deep. They have to remove all that body of dirt there to get that little vein of tungsten ore of that representative sample that was shown here."

HINES MAKES CHANGES

IN DEMURRAGE RULES

Walker D. Hines, Director General of Railroads, on June 21 signed supplement number two to General Order Number seven referring to demurrage rules, regulations and charges, effective July 20, 1919. The charges at present are \$3 per day for each of the first four days, after expiration of free time, \$6 per day for each of the next three days, and \$10 per day for each succeeding day.

They will be reduced to \$2 per day for each of the first four days after the expiration of the free time, and \$5 per day for each day thereafter. The supplement also provides that the average agreement which at present applies only to cars held for unloading will also be applied to cars held for loading, but the loading and unloading agreement will be separate.

Representatives of the shippers and of the American Railway Association recommended reductions. Mr. Hines pointed out that demurrage charges are not imposed for the purpose of securing revenue but to assist in the punctual unloading and loading of equipment, and also that in view of the diminished purchasing power of the dollar and the increasing demand for equipment it was doubtful whether the prompt unloading and loading of equipment could be secured by means of these reduced charges. He referred to the heavy movement of traffic expected within the next few months and announced that, if the results were not successful, he would feel compelled to increase the demurrage charges.

SHIPPING BOARD ISSUES NEW EUROPEAN COAL TARIFF

The United States Shipping Board and the

Emergency Fleet Corporation announce the following rates of freight from North Atlantic Ports and Charleston, S. C.:

To	Coal, per ton of 2,240 lbs.	Guaranteed daily discharge, tons	Coke, per ton of 2,240 lbs.	Guaranteed daily discharge, tons
Bordeaux/Havre/St. Nazaire.....	\$22.50	700	\$33.75	600
Cherbourg.....	22.50	700	33.75	600
Rouen.....	23.00	1,000	34.50	600
Antwerp/Rotterdam/Terneuzen.....	22.50	1,000	33.75	600
Göthenburg.....	26.50	800	39.75	600
Landskrona/Malmö.....	27.00	800	40.50	600
Oxelösund/Stockholm.....	28.00	800	42.00	600
Helsingfors/Sundsvall.....	30.00	800	45.00	600
Bergen/Christiana/Copenhagen.....	27.00	1,000	40.50	600
Korsør/Rønne.....	27.00	1,000	40.50	600
Trondhjem.....	28.00	1,000	42.00	600
Lisbon.....	22.50	1,000	33.75	600
Cádiz.....	23.50	1,000	35.25	600
Bilbao/Cartagena/Barcelona.....	26.00	1,000	39.00	600
Cette/Marseilles/Naples.....	26.00	1,000	39.00	600
Civitavecchia.....	26.00	1,000	39.00	600
Nice/Genoa/Leghorn/Spezia/Savona.....	26.50	1,000	39.75	600
Piræus.....	28.50	1,000	42.75	600
Trieste/Fiume/Venice.....	31.00	800	46.50	600
Salonica.....	31.00	1,000	46.50	600
Bari.....	30.00	1,000	45.00	600
Constantinople/Constanza/Smyrna.....	31.00	1,000	45.00	600
Algiers/Oran.....	26.00	800	39.00	600
Tunis.....	26.50	1,000	39.75	600
Sfax.....	27.50	1,000	41.25	600
Alexandria/Port Said.....	31.00	1,000	46.50	600

Conditions.—Discharge as above indicated, with time counting twenty-four hours after arrival of vessel, whether in berth or not, Sundays and holidays only excepted. If discharge is not completed within the time specified demurrage to be paid at the rate of \$1 per net registered ton per running day, payable day by day.

Coke.—Subject condition that vessel to have option of carrying not over 25 per cent on deck at owner's risk.

The Flexible Steel Lacing Company of Chicago has perfected and is manufacturing a new belt fastener, designed for heavy belting and made in sizes for belts varying from $\frac{3}{8}$ inch upwards in thickness.

The simplicity and strength of design of this new device, which has been named the "High Duty" fastener, have met with the approval of mechanical men to whom it has been submitted.

The "High Duty" fastener embodies a new application of the compression principle as applied to belt fasteners. It consists of two rectangular steel plates, which clamp on either side of the belt and are connected by bolts which go through the belt.

TWENTY DAYS ALLOWED TO OBJECT TO WAR MINERALS FINDINGS

Secretary of the Interior Lane has announced that the following procedure had been adopted in connection with claims arising under the Act of March 2, 1919, known as the Minerals Relief Act:

The findings of the Minerals Relief Commission will be made and thereafter twenty days will be allowed claimant to file typewritten or printed brief based upon the record already made, making such comment on the Commission's findings as may be desired. At the end of twenty days the case will be finally submitted to the Secretary of the Interior. No new facts will be considered, those which have been submitted to the Commission only being given consideration. No oral argument will be heard.

Stocks of lead are believed to have increased since January 1. Normal domestic consumption is estimated at 400,000 short tons annually. At present, consumption in the manufacture of batteries is normal, of cable sheathing only 25 per cent, and in white lead and plumbing 80 per cent.—Bureau of Mines Minerals Investigations.

MINERALS SEPARATION DECISION

The far-reaching decision recently handed down by the United States Supreme Court in the case of Minerals Separation, Limited, vs. Butte & Superior Mining Company, is discussed quite at length by Mining and Scientific Press of June 21, which "deprecates any undue discouragement at this time and urges the leaders of the mining industry in the United States to consult one another for the purpose of defensive cooperation immediately, since the District Court of Montana must forthwith amend its decision in conformity with the decree handed down by the Supreme Court."

The validity of Patent No. 835120 having been established in the decision of the Hyde case, which limited the patent to a "critical proportion" of oil, "amounting to a fraction of 1 per cent on the ore," the defendant company took the position that the "critical proportion" so described was one-half of 1 per cent or less. To test its legal rights further, the Minerals Separation Company started its suit against the company which had backed Mr. Hyde in the original litigation, and the District Court of Montana refused to accept "one-half of 1 per cent" as the definition of the "fraction of 1 per cent." The Ninth Circuit Court of Appeals in San Francisco, however, accepted the interpretation, and the issue was again referred to the Supreme Court of the United States.

The highest court is now holding that the limiting of the patent to the use of one-half of 1 per cent of oil was an error, and that the patent extends to and covers the use of oils in amounts equal to any fraction of 1 per cent.

The Supreme Court also holds that the patents are protected to "a reasonable degree of variation" in the proportion of oil used by the Minerals Separation process. The conclusion of the court was that better results probably would have been obtained by the use of less than 1 per cent of pine oil alone, but since mineral oil has a "preferential affinity for metalliferous matter," the use of it is not an infringement if the aggregate amount of all oils is in excess of 1 per cent. The court says "the patent is on the process; it is not and cannot be on the result." "This is," says the Mining and Scientific Press, "important; it may serve as a new point of departure. In short, the patent rights of the Minerals Separation Company are upheld in respect of the use of any proportion of any oil up to 1 per cent, but not beyond that point. This, even in the present state of the art, does not give them a monopoly of flotation, but it is a blow to the economical use of the process because, although it can be conducted successfully with more than 20 pounds of oil per ton of ore, it is a fact that the larger proportion of oil is a nuisance in the mill and entails an extra cost of about one cent per pound of additional oil. Nevertheless, even the extra cost and trouble will be preferred by the managements of some of the mining companies to paying a royalty to the Minerals Separation Company and becoming subject to its inquisitorial methods."

In November, 1923, the patents of the Minerals Separation Company expire. The Butte & Superior Company has announced that it will continue to use the process of separating ore by the use of more than 1 per cent of oil in agitation. The Mining and Scientific Press expresses a "reasonable expectation that before the expiration of Patent No. 835120, four years hence, a more economical and more efficient process of concentration will be devised, for a number of new ideas are in course of trial."

No doubt Minerals Separation Company, Limited, will profit exceedingly by the finding of the United States Supreme Court. Several big copper mining companies will be forced to make heavy payments in damages for past infringements upon the process as fixed by the highest court in the land; and during the four years Minerals Separation will probably continue to practice its methods of the past several years to its own financial benefit, and to its own permanent destruction and injury to the entire mining industry.

"In the past its tactics have been needlessly offensive and we have not hesitated to condemn them," says the editor of the San Francisco publication. To this utterance the MINING CONGRESS JOURNAL wishes to add that these oppressive business practices have made Minerals Separation Company, Limited, one of the most thoroughly disliked business organizations in the United States. It is tragic, in a way, for a group of men, holding such rare opportunity, both for profit to themselves and helpfulness to an industry, to have been so near-sighted as to have made their very business memory anathema rather than to have created for themselves a real place in the industry with which they must associate.

The opening left by the Supreme Court, through allowing the use of an excess of oil in agitation, creates a most unusual situation for the flotation patent; that is, the process of using oil in agitation is no different whether one is using one-half of 1 per cent or an excess of 1 per cent.

A most important and interesting statement was made by the Mining and Scientific Press, which was: "An issue involving an enormous amount of money and vital to the interests of a basic industry has gone for adjudication to jurists devoid of the special education required for the purpose, and without the time needed for the proper preparation of the requisite understanding of the technical problems involved. . . . Other patents remain and further litigation is assured, for some of the patents antedating No. 835120 are held in this country by opponents of the Minerals Separation Company."

The memorandum of the American Mining Congress presented to the Federal Trade Commission by Pershing, Nye, Fry and Talmadge, as counsel for the Mining Congress, gives quite a lengthy history of the organization and business methods of Minerals Separation, Limited. It is shown that it is engaged in interstate

commerce, and that all its transactions are to be checked upon under the laws and rulings creating and issued by the Federal Trade Commission. It is also set forth that many methods "are expressly stated to be directed against inventors, manufacturers, vendors, lessors, licensors and users . . . of apparatus, processes, paraphernalia, supplies, data, samples and other commodities used in the separation and concentration of ores and not covered by any patents or patent rights controlled by the respondents," and charges "violation of law and public policy as regards patents and the exercise of patent rights. It quotes license agreements under which the company operates, showing how, by contract, Minerals Separation has forced the users of its process to assign or transfer any or all inventions or improvements in connection with the process of the Minerals Separation North American Corporation and reviews for the Trade Commission many decisions of the courts showing that such a contract, if carried out, is directly in opposition to the policies recognized as right and just by the courts and in business. The American Mining Congress also held that the Federal Trade Commission has jurisdiction in respect to exorbitant and discriminatory royalties charged by Minerals Separation and asks the Federal Trade Commission to explicitly direct as to the amount of royalties to be charged by the company, so that the "exorbitant and discriminatory royalties, which are the purpose and crowning accomplishment of years of unfair methods of competition on the part of the Minerals Separation North American Corporation and other respondents, may not be perpetuated after the mere practice of such methods has been discontinued."

Thus far the Federal Trade Commission has not determined its action, upon the appeal of the American Mining Congress, to be allowed to intervene in behalf of the industry as against the destructive methods of the corporation. As the patent is now in part only upheld by the highest court of the land, it is hoped that an early and favorable decision may be rendered by the commissioners and that the Mining Congress may be allowed to proceed actively in cooperation with other forces in the prevention of a continuous practice which has made the Minerals Separation Company a destructive rather than a constructive element in the development and continuance of the mining industry.

Coal for Switzerland

The War Trade Board announces that shipments of coal to Switzerland may be consigned to the Societe Cooperative Suisse d'Importation du Charbon; and furthermore that it is no longer necessary for the importers in Switzerland to obtain certificates from the Societe Suisse de Surveillance Economique covering such importations.

DETAILS OF GERMANY'S CHEMICAL TRADE IN THE U. S. IS REVEALED

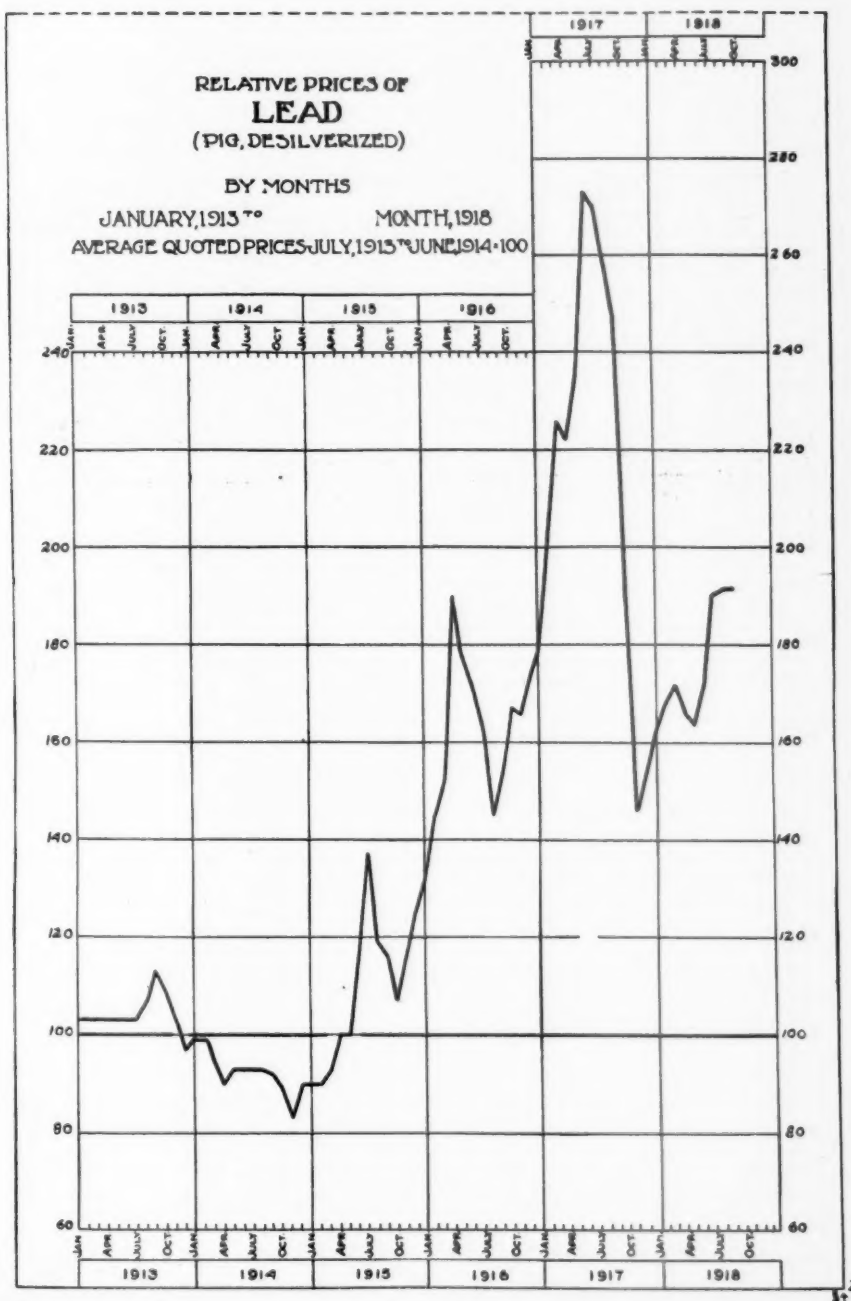
America's dependence upon Germany's chemical industries before the war is pointed out in great detail in a census of chemical imports issued by the Bureau of Foreign and Domestic Commerce, Department of Commerce, with the cooperation of the American Chemical Society. The purpose of the bulletin is to show to American manufacturers the extent of the domestic markets for the various chemical lines that are now being manufactured in this country for the first time.

It is shown that nearly \$45,000,000 worth of manufactured chemicals were imported into this country in 1914, not counting dyes, which the bureau has covered in a previous bulletin. Of this total more than 40 per cent came from Germany, which was the chief source of supply. These German chemical products included a great many that could not be obtained from other countries, because they were patented or because the secret of their successful manufacture was not known in other countries. Some of them, especially the medicinal preparations, were of prime importance, although in dollars and cents the imports do not seem impressive.

A great obstacle in the way of getting the manufacture of these articles started in this country has been the fact that no one knew just how much of a market there was for them, and it was to supply this detailed information that the Bureau of Foreign and Domestic Commerce and the American Chemical Society undertook the compilation of this report. Firms who are obtaining German patents from the Chemical Foundation, recently organized under the direction of the Alien Property Custodian, expect to find in the statistics the facts they need to plan their operations intelligently.

In addition to being the chief source of imports of dyes and other coal-tar products, acids, fertilizers, and a long list of other chemicals, Germany normally supplied this country with large quantities of allied products, such as paints, pigments, and varnishes, all of which are shown in detail in the report. Imports by quantity and value of 2,500 products are included, and there is a list of 3,000 other products imported in amounts less than \$100 each. For most of these products import statistics are now printed for the first time.

George L. Pratt of Atlanta, Ga., who has been spending some time in Washington in connection with his claim under the War Minerals Relief Act, has returned to his home.



GREAT FIRST-AID CONTEST TO BE HELD IN PITTSBURGH

That America can bind her wounds as skillfully as she can fight will be shown in the great national first-aid and mine-rescue contest to be held under the auspices of the Bureau of Mines, Department of the Interior, at Pittsburgh, Pa., September 30 and October 1.

With the event still more than three months away, it reaches the Bureau of Mines that coal and metal miners all over the country are engaging in first-aid and mine-rescue contests to fit themselves for the national demonstration. In sixteen different mining states, local or state meets have already been held or will be held in the near future.

It is estimated that out of the million miners in the United States more than a hundred thousand are well trained in emergency first-aid work and have been instrumental in saving many lives in and around mines. It is said to be a frequent occurrence for hospital surgeons upon receiving an injured miner to declare that the first-aid treatment received in the mine from the miners had undoubtedly saved the man's life.

These first-aid teams are scattered throughout the United States where mines are found and are the results of the pioneer work of the Bureau of Mines in maintaining a mine-rescue car or station in each of the mining fields for the purpose of training these men.

In addition to this work, the bureau's experts teach the miners how to save life in mines, and especially the use of the oxygen mine-rescue apparatus that permits the wearer, after a mine explosion or disaster, to enter the deadly atmosphere there with comparative safety and succor possible living miners. These mine-rescue teams, located at the various mines, are also to participate in the national demonstration.

Already state first-aid and mine-rescue contests have been held at McAlester, Okla., and Lexington, Ky. The Colorado Fuel and Iron Company will hold such a contest at Trinidad, Colo., July 4; there will be a state meet at Norton, Va., on July 4; the Alabama Fuel and Iron Company will hold a similar meet at Birmingham, Ala., on July 4; and there will be a meet of the Big Sandy District at Pikeville, Ky., on the same day. At Butte, Mont., on July 28, the miners will hold a state meet and also on August 30 at Trinidad, Colo. Utah and southern Wyoming will be represented at a first-aid and mine-rescue meet at Salt Lake City, Utah, August 23. Arrangements have been made for the California state meet at Sacramento early in September. New Mexico is arranging for a similar meet about September 1, but has not yet selected the place. There will also be a state-wide meet for Washington on August 9 at one of the coal-mining centers in western Washington. In Pennsylvania, some time during the summer, there will be a number of first-aid meets for different coal-mining companies. At St. Benedict the Rembrandt Peale Coal Company will hold its meet during the summer; also at Greensburg the Argyle Coal Company will hold a meet; the Richmond Hill Coal Company at Hastings,

Pa., and the West End Coal Company at Mocanaqua will also hold a meet of the local coal companies at Barnesboro, Pa. Tennessee will have a meet at Jellico some time in September, and Illinois will hold a state-wide first-aid and mine-rescue meet at Springfield at a time to be announced later.

"Whether or not it is the reaction from the killing of men in the recent world orgie, or the release from the strain of the tremendous war production of coal," said Van H. Manning, Director of the Bureau of Mines, "the miner today is bending his best interests to the saving of life. From the reports that come to me, there is the utmost enthusiasm in these trial first-aid and rescue meets and almost as much interest as if the national meet were a great, country-wide athletic contest involving the whole people. The national meet promises to break all preceding events in numbers and enthusiasm. It is to be the miner's own field day, in their own way, and the honors are to go to the most efficient, the most skillful in the saving of human life. I expect that this national miners' tournament will have a wholesome effect on the industries of the country generally."

Honor for Dr. Van H. Manning

The announcement that the honorary degree of Doctor of Engineering has been conferred upon Van H. Manning, Director of the Bureau of Mines, by the University of Pittsburgh, was public recognition of a well-known service rendered by Director Manning during the war. It was largely due to the deep personal interest of the director that the chemical and research departments of the bureau began, soon after war was declared, to meet the needs of the Army and Navy for fighting gas and non-explosive gas for air service. It was largely due to his foresight that much necessary research and experiment work during the early years of the European war eliminated many problems which cleared the way for quick and conclusive work when America's need came. And, while the Army has endeavored to take credit for the wonderful development of the gas-warfare division, it is well known to friends of the Bureau of Mines that the credit belongs to the bureau under Dr. Manning and not to the War Department. In presenting the degree to the director, Dr. Raymond F. Bacon, Director of the Mellon Institute, said:

"I have the honor and pleasure to present the distinguished Director of the United States Bureau of Mines, Mr. Vannoy Hartrog Manning, for the degree of Doctor of Engineering. This distinction is most appropriately conferred upon Mr. Manning in recognition of his leadership of all work on the conservation of our natural resources. Possessing the highest executive ability, an authority on mineral technology, Mr. Manning has rendered inestimably valuable service to the nation in the development of the activities of our world-famed Bureau of Mines and in demonstrating to our industrialists and legislators that research is the basis of national development."

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Paul Wooton, News Editor.

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Women in Industry

The total number of women employed under the United States Railroad Administration reached the high-water mark on October 1, 1918. At that time there were on the rolls 101,785 female employees.

Statistics compiled by the Women's Service Section of the U. S. Railroad Administration, giving the number of women employed and the character of their employment since the roads came under federal control, were made public by Walker D. Hines, Director General of Railroads.

The number of women employed on April 1, 1919, shows a decrease of 14.3 per cent as compared with January 1, 1919. On January 1 of the present year there were on the rolls of thil railroads 99,694 women employes, while on Apre.

1 the number had dropped to 85,393. This was due chiefly to the reduction of labor force which occurred in February and March. It was also partly due to the return of men from military service who were reinstated by the railroads. On the Eastern lines the drop was 17.7 per cent, while in the South it was 6.5 per cent, and in the West 11.4 per cent.

The clerical or semi-clerical occupations, including all the office-workers, ticket sellers and telephone switchboard operators, constituted the largest percentage of the total for the year 1918, being 72 per cent. The statistics show that more than 5,000 women were employed in railroad shops and more than 1,000 in round-house work. The latter included, among others, turntable operators and engine wipers. On October 1, 1918, there were six women employed as blacksmiths, helpers and apprentices while a large number of others worked as boiler, makers, coppersmiths, electricians and machinists. There were 377 women employed as station agents, assistants and agent operators on the same date, while 50 were at work as switch tenders. There were 931 pushing trucks and handling freight. Watchwomen to the number of 518 were employed on the railroads, doing duty both day and night.

The report shows that considered from the point of view of occupation, the greatest reduction of women employes has taken place in round-houses and shops. Their work in these places was in many cases found unsatisfactory, there being too much heavy physical labor involved. Under these circumstances it was unavoidable that they should be dropped when man labor again became available.

In the clerical occupations best fitted for women, the total number employed at the present time is 68,129. There has been a reduction in this group of 11.2 per cent.

War Minerals Claims

When the docket of the War Minerals Relief Commission closed, June 2, claims aggregating \$18,000,000 had been filed. Shortly thereafter the commission left for extended hearings, which will be held in the centers most convenient to those having claims.

The commission's interpretation of the many important feature sof the law will be held in abeyance so that arguments may be presented by those concerned.

Thomas Thornton Read well known to mining men as formerly associated editor of The Mining and Scientific Press, has been added to the staff of Director Manning, of the Bureau of Mines, charged with the special duty of investigating the work of the bureau in relation to the public welfare.

REAL INDUSTRIAL DEMOCRACY

By JOHN T. BURNS

I do not know John Leitch of Philadelphia. I never saw William DeMuth of New York City. I assume that Mr. DeMuth is not the superintendent of a Sunday School, basing the assumption on the fact that Mr. DeMuth secures his income from the manufacture of "smokers' supplies."

The readers of the MINING CONGRESS JOURNAL will recall the recent editorial "Over the Table," and to those readers I wish to relate the story of John Leitch's idea and how it was worked out by William DeMuth, an employer of 900 men and women in the town of Richmond Hill. Mr. DeMuth had erected a great plant and established his trade mark with a wide reaching trade. He was a busy man in business hours, but devoted his golfing time to a study of the economics of his trade. That led him to study his men and women employees.

In fifty years of business he had experienced little labor trouble, but he saw that the profits of the concern were not all that they should be, largely because of "leaks," or waste caused at times by idle machines, at others by lack of cooperation and always by wasted material through efforts of price-workers to rush their work, to increase the day's earnings. Besides, the "rush work" resulted in lowering the quality of some products.

DeMuth heard of John Leitch, a "business engineer." Leitch outlined a plan of "democratization" for the factory. It was to be a Great Experiment. Leitch outlined his plan to the 900 employees. Leitch proposed that any saving in costs resulting from the adoption of his plan should be divided between employees and firm, division to be made every two weeks. DeMuth & Company were ready to try the experiment. The employees, timorously adopted the innovation and, creditably to themselves, went to work with a will to prove or disprove its practicability.

This was two years ago.

The first two weeks settled the permanency of the plan. The first dividend was $6\frac{1}{2}$ per cent. Since then it has been as high as $17\frac{1}{2}$ per cent.

And for two years the plan has been known as "The DeMuth Industrial Democracy."

The "plan" includes the following political organization: A "Cabinet" composed of the executive officers of the company; a "Senate" composed of the foremen and superintendents of the factory; a "House of Representatives" elected by the employe body, on the basis of one representative to 30 employees.

The qualifications for membership in the "Lower House" are ability to speak and write in English, to have been on the pay roll of the company one year or longer, to be known as "square" in all matters, and of good repute.

The "Lower House" discusses, in weekly sessions, all of the week's developments. It

takes on and works out the firm's troubles as it does those of the workers. Its "bills," if passed, go up to the Senate for ratification. From the Senate they go to the Cabinet and, if adopted, become working laws. The Cabinet has the power to veto. In two years there has never been occasion to veto, which speaks well for the judgment of the House of Representatives. The firm abides, as it agreed to do, by the actions of the body politic.

"Horse play," says some one. "Boys' work," says another. All right, opinions are easily given, sometimes unthoughtfully. But check on the results.

1. In two years, no strikes; not a machine idle an extra day without cause.

2. Complete accord between employer and employe.

3. Every employe sees to it that his fellow-worker does his utmost *all the time* because each man's dividend depends on his fellow-worker.

4. Hours of labor cut from 53 per week to 48 and output of factory maintained at original standard.

5. Quality of output improved.

6. Continued payment of dividends, thus increasing wages of employe and profits of firm.

7. Employees consider they work upon a permanent basis and assume responsibility for firm's property and business prosperity.

8. Employees profit from both saving in production and saving in overhead, as, for instance, the five hours per week of overhead expense saved by shortening working hours, is a large sum. This is a credit account continuously.

9. American born employes take interest in educating other nationalities, as education tends to improve their work and add to dividends.

10. It is no longer the foreman who tells a man to "get busy on the job;" it is his fellow-workers who suffer by his failures. The man who "knocks off early" or is absent without cause has to explain—not to the firm but to the workers, who have to pay for his idleness.

This DeMuth plan of "Industrial Democracy" is already attracting attention among manufacturers, and many are visiting the big pipe plant to interview the firm and the workers.

Perhaps John Leitch and William DeMuth have already immortalized their names. It appears so to the writer.

To show how well the rule works both ways, a member of the House of Representatives says: "The reason I am for industrial democracy heart and soul is that I can always get a square deal. Every question has been settled fairly. Nobody goes around nursing a grievance any more. He tells it to his representative and it is looked after before it gets to be serious. Nobody ever 'lays down' on the job. It does not pay. The man who used to go around with a good idea for machinery improvement in his head

now puts his labor-saving device to the test in the factory, and some of these devices are lowering costs, increasing production and adding to our dividends."

William DeMuth, the head of the concern, is filled with the enthusiasm naturally resulting from such success. He says that the plan can be made workable in any institution employing any number of men or women. He insists that the industrial democracy has in no way weakened the authority of the firm over its employees or business but, on the contrary, has strengthened the hold of the DeMuth Company on its workers, by sharing the responsibilities for perfect harmony and high quality of work.

"Even during the war, with the lure of 'war plant wages' before them," said Mr. DeMuth, "our employees saw to it that their fellow-workers remained at their places or brought in friends to fill vacancies."

In telling this story I am suggesting nothing. The economic situation is sufficiently uncertain to allow every employer and every laboring man to find a lesson in everything which works out satisfactorily. The DeMuth industrial democracy has worked out that way.

A closing thought: The man who has a good job, who is interested in making it a better job, who is contented and perhaps owns his own home, isn't apt to become a bolshevist and toss his substance to the birds.

ULTIMATE PRODUCTION OF OIL WELLS SUBJECT OF BULLETIN

A bulletin on the "Decline and Ultimate Production of Oil Wells, with Notes on the Valuation of Oil Properties," by Carl H. Beal, has just been issued by the Bureau of Mines, Department of the Interior. This bulletin outlines methods for estimating the amount of oil that may be recovered from properties in the various oil fields of the United States, as well as data on the application of these methods in the valuation of oil properties. The methods are essentially those adopted by the Bureau of Internal Revenue in allowing for depletion charges on oil properties in income and excess profit taxes, the methods of the Bureau of Internal Revenue being founded on the methods developed by Carl H. Beal and others in the Bureau of Mines.

One of the most vexing problems that confronts petroleum producers and petroleum engineers is the estimation of the total amount of oil that may be obtained from the oil wells and from oil lands and the rate at which the future productions may be obtained. This is a problem upon which much thought has been given and much work been done in the past, but it has only been within recent years that it has been brought down to a rational engineering basis. The bulletin of the Bureau of Mines is a record of the work done by many engineers with much information in advance that has been developed by the Bureau of Mines.

It is obvious that an estimate that is reasonably reliable is an extremely valuable bit of information to the producer, to the prospective

buyer, to the pipeline companies, and refiners depending upon certain sources of supply, and for the purpose of determining depletion allowances for bookkeeping or taxation. In the past this has usually been done upon the personal judgment of the producers of wide experience, though many of the principles employed in this bulletin have been used consciously or unconsciously by producers; as, for example, observing the rate at which production falls off. The bulletin is the result of a rational and systematic compilation and analysis of records whereby essential principles and facts are established and the factor of personal experience and judgment is almost eliminated.

The bulletin outlines old and new methods for estimating the output of oil lands and gives numerous curves and other data which should be of great assistance to oil producers and engineers in determining the probable amount of oil that a property might yield. The problem of the application of methods of oil valuation is covered and explanations given in the use of methods in computing depletion allowances in bookkeeping and in taxation. The bulletin should do much towards developing scientific methods for the buying and selling of properties, amortizing capital investment, and in estimating future productions of properties and fields in the United States.

Bulletin No. 177 may be obtained free of charge by application to Van. H. Manning, Director of the Bureau of Mines, Washington, D. C.

IMPORT RESTRICTIONS ON TIN AND METAL ALLOYS REMOVED

The War Trade Board announce that applications will now be considered for licenses to import pig tin and all metal alloys containing tin, including tin drosses, tin oxides, solder drosses, type metals, anti-friction metals, waste metals, and other metals containing tin; subject, however, to the following conditions and limitations:

1. That such licenses will permit the importation only of shipments made from points of origin on or after June 30, 1919; and
2. That such import licenses will not be valid for entry until August 1, 1919.

Stephens-Adamson Mfg. Co., Aurora, Ill., announce their new representation in the San Francisco district.

The firm of Bannon, Bodinson, MacIntyre, Inc., 317 Market Street, San Francisco, will have charge of the engineering sales work in this territory. The members of this firm and the technical staff are trained men with wide experience in designing, elevating, conveying and screening machinery.

The S-A Products are in such demand in this district that it was found advantageous to establish this new branch to give S-A customers the same engineering sales services as are so valuable in other territories.

CALIFORNIA MINERAL OUTPUT IN 1918 REVIEWED BY HAMILTON

The statistical division of the State Mining Bureau, under the direction of Fletcher Hamilton, State Mineralogist, has now received complete returns from the operators on the output of a number of the mineral products for 1918. The data are given herein in advance of the main report, in order that those interested may receive the information, at an early date. The date of publication of the final and complete bulletin on the mineral yield of the year is dependent upon the promptness of the replies from the operators. So far this season, the bulk of the returns have come in earlier and in better form than in previous years; for which reason, it is expected that the final bulletin will be issued earlier than usual.

The output of asbestos in 1918 amounted to 229 tons valued at \$9,903, as against 136 tons worth \$10,225 in 1917. The material was entirely of the chrysotile variety and came from Alameda, Calaveras, and Nevada counties, mainly the last named. It was employed principally in magnesite cement stucco, flooring, and steam-pipe covering. Some of the Nevada County product is of No. 1 spinning fiber.

The output of borax in 1918 amounted to 88,772 tons, valued at \$1,867,908, as against 109,944 tons worth \$2,561,958 in 1917. The product is entirely from the colemanite deposits of Inyo and Los Angeles counties.

The output of cement in 1918 amounted to 4,772,921 barrels valued at \$7,969,909, compared with 5,790,734 barrels worth \$7,544,282 in 1917. Because of the curtailment in general building operations on account of the war, there was a decrease in the volume of cement used, but the average selling price was materially higher. The result was a net increase of \$425,627 in the total value over the preceding year.

The output of magnesium salts in 1918 amounted to 1,008 tons valued at \$29,955, compared with 1,064 tons worth \$34,973 in 1917. These salts were the product of bittern waters at two plants on San Francisco Bay and one at Long Beach and consisted mainly of magnesium chloride sold for use in Sorel cement for magnesite flooring and stucco. A small amount of magnesium sulphate was also made at one of the Alameda County plants.

The output of pyrite in 1918 amounted to 131,029 tons valued at \$425,012 as against 111,325 tons worth \$323,704 in 1917. The material came from two properties in Alameda County, and one each in El Dorado and Shasta counties; and was utilized for the manufacture of sulphuric acid.

The output of pumice and volcanic ash in 1918 amounted to 2,114 tons valued at \$28,669, as against 525 tons worth \$5,295 in

1917. The increase was due to shipments from a newly operated deposit near Mt. Shasta in Siskiyou County, and to larger shipments from Imperial County. Both of these deposits are of the vesicular, block pumice. A small tonnage of high-grade volcanic ash was sold from Humboldt County.

There was a small output of barytes in Monterey County, cadmium in Shasta County, fluorspar in Riverside County, lithia mica (lepidolite) in San Diego County, onyx marble in Solano County, and serpentine "marble" in Los Angeles County; of a total value of \$97,732. As there was but a single operator on each of these substances in each locality, the figures are combined so as not to reveal the individual's business.

There was a small tonnage of sulphur produced in 1918 at each of two new plants in Colusa and Inyo counties, toward the end of the year, but none of the product had been shipped up to December 31.

FAY POINTS OUT NEED FOR ACCURATE ACCIDENT FIGURES

Speaking before Minnesota and Michigan mining men at the recent safety conference, A. H. Fay, of the Bureau of Mines, said in part:

"Considering the vastness of the mining operations of Minnesota and Michigan, the safety engineer has a large field in which to work and opportunity to accomplish results that cannot be obtained elsewhere. The progress in the Lake Superior District in the last ten years in matters of safety and safety appliances and mine inspection is evident from the accident record and from a casual observation of the safety appliances installed. This progress is further evidenced by the large number of safety engineers employed in the mines in this district, and your interest in matters of safety is shown in the active part you take in meetings of this character.

"Before offering any suggestions as to what the safety engineer can do for accident statistics, it is well to point out some of the reasons why accident statistics are necessary. It is not to preserve a record of discomfort, pain and suffering of injured employes that statistics are collected, nor to furnish statisticians with a set of figures which may be juggled to suit any peculiar whim and utilized for the construction of fancy charts. These, however, are necessary adjuncts to the main purpose, viz., to obtain information by which to diagnose industrial accidents in order to determine their cause and provide a remedy. In every court of justice it is necessary to have all the available evidence to identify the guilty one, in order that proper verdicts may be determined and just sentences imposed. Statistical records are essential as evidence to prove the guilt of certain mechanical devices, which assault with intent to maim or kill, and to determine with a reasonable degree of accuracy the personal element entering into the cause of accidents.

"There are a few mine operators who have not awakened to the need of accident statistics and therefore feel, when asked for certain information concerning accidents to their employees, that it is a sort of inquisition being forced upon them to disclose their private business. Far be it from this. It is for their benefit as well as for the welfare of their employees. Whatever helps human beings in the matter of health and comfort will pay good dividends to the man who provides these essentials. Sick and crippled employees in the hospital or at home are a burden to themselves and their families, the community and the state, without any benefit whatever to their employers. Even though a crippled man may be employed as a pensioner, he cannot render full service to his employer, his family, nor the community.

"Statistics should embody all of the information available concerning each accident if the best results toward accident prevention are to be obtained. So long as accidents occur, it is necessary for the safety engineer to keep correct and detailed records. It is not enough to know that a man fell down a shaft and was killed. Why did he fall down? Who was to blame? Was the shaft properly guarded? Could the accident have been avoided? It is the answer to these questions that should be recorded in accident statistics. The safety engineer should study intelligently every accident from all angles. If the accident was preventable, he should install a device that will prevent its occurrence again. At the close of the year, he should take an inventory of his accident records with the object of finding out what and who was to blame for each group. Having found out the principal causes, he should see that proper remedies are then applied; for example, should it be known that a certain type of machine has cut off a dozen fingers during the year, the remedy is not to supply additional fingers, but to devise a guard for the machine or install another type for this particular work.

"If human beings were perfect and it were possible to devise perfect machinery, there would be no need for accident statistics. While someone has a lapse of memory for an instant, a machine that is under human control moves 3 inches too far and crushes a man to death. Another man did not look where he was stepping and, as a result, fell down a shaft. True enough, the shaft should have been guarded to prevent the thoughtless from going into it. Industries have many accidents because of mistakes; many accidents occur because of carelessness, and many because of improper mechanical devices. Mistakes are made by managers as well as by the employees; both are often careless, and both are responsible for mechanical equipment, the employer in providing it and the employee in keeping it in proper condition when installed and turned over to him to operate. The safety engineer should see that proper machinery and other appliances are installed, and he should also see that they are properly operated and cared for. The safety engineer is a 'middle man' between the operator and the miner."

OIL FOR NAVY TO HAVE

FIRST CALL ON TANK SHIPS

In answer to request for tonnage made by private firms to enable them to tender on the proposals covering the fuel oil requirements of the Navy, the United States Shipping Board announces that during the fiscal year beginning July 1, 1919, it will, to the extent of its available tank tonnage, give priority to those firms who may hereafter receive award for the delivery of petroleum products for the account of the United States Government.

Allocations will be made on government time form at the uniform rate of \$6.50 per deadweight ton per month or on a voyage basis at the rate indicated below:

	Cents
Mexico to Boston or Portsmouth, N. H.	85
Mexico to New York or Providence, R. I.	80
Mexico to Baltimore.....	77
Mexico to Norfolk.....	75
U. S. Gulf Ports to Boston or Portsmouth.	79
U. S. Gulf Ports to New York or Providence.....	74
U. S. Gulf Ports to Baltimore.....	71½
U. S. Gulf Ports to Norfolk.....	69

Voyage rates between other points may be had on application to the Tank Steamer Executive, New York City.

Voyage charter parties will provide for 144 hours loading and discharging and demurrage at the rate of \$80 a running hour, reduced to \$40 a running hour in the event of machinery breakdown.

The rates apply on cargoes for United States Government account only during the fiscal year ending July 1, 1920, without prejudice to any rate that may from time to time be established on fixtures for private account.

Magnesite Situation Unchanged

So far as the general situation in the magnesite industry is concerned, there has been no marked change from the quiet conditions prevailing during the past five or six months. This industry is linked intimately with other large industries like the steel and copper industries in which magnesite is used in furnace linings, and to the building trade, where it is used in making special high-grade flooring materials. To a less extent it is employed in making insulating, nonconducting and fire-proofing materials, and in certain medical products like Epsom salts. Probably 85 to 90 per cent is used in the refractory industry, and the remainder chiefly in the flooring trade. Until the steel and building trades take a new start, little can be hoped for in the magnesite business.—Bureau of Mines Minerals Investigations.

Bulkeley Wells, president of the American Mining Congress, after spending several weeks in New York, Boston and the East, is again at his Denver office.

NATIONAL LEGISLATION

Congress has been largely engrossed during the past month in the consideration of the large appropriation bills and discussion of the League of Nations. The only bills of importance to mining that have passed both Houses are the Sundry Civil Bill and S. 47, authorizing mining on Indian Reservations, which was made possible because it was made a part of the Indian Appropriations Bill.

Hearings have been held before the Ways and Means Committee of the House on tariff legislation. Tungsten, magnesite, dye stuffs, zinc and potash already have been heard. Arrangements are being made to provide hearings for all those who desire to be heard. *H. R. 2929* and *H. R. 1246*, discussed last month, are still in committee. *H. R. 1692* is incorporated in S. 47, which, as above mentioned, has passed both houses. *H. R. 544*, creating a permanent employment department in the Department of Labor, met with strenuous opposition from many sources. Congressman Blanton of Texas led the opposition in the House. \$400,000 is included in the Sundry Civil Bill to meet the provisions of this bill.

H. R. 496, The Ferris Leasing Bill, is still before the House Committee on Public Lands, but it is expected that it will be reported out early in July. *H. R. 487*, by Mr. Mondell, the National Soldiers Settlement Act, is expected to be reported from the Public Lands Committee daily. It is understood that this bill is being favorably considered. *H. R. 1186*, Mr. Steele's bill conferring additional power on the Federal Trade Commission, is before the House Interstate Commerce Committee. Mr. Steele personally appeared before the committee in behalf of the measure, but no action has been taken. *H. R. 188*, Mr. Taylor's "Blue Sky" bill, is before the House judiciary Committee, no action having been taken thereon.

During the month the following bills of interest to mining men have been introduced:

Graphite—*H. R. 5941*: Introduced by Mr. Heflin provides for a tariff of 1 cent per pound of crude graphite ores, which contain 50 per cent or under of graphite carbon; 2 cents per pound of graphite for ores containing 50 per cent graphite carbon. The bill defines crude graphite as ore which has not been subjected to any process of refining or concentration, which changes the graphite content of the ores as mined: a duty of 3 cents per pound upon lump and chip crystalline graphite (plumbago, silver lead) is provided for. Lump and chip are defined as larger crystals of graphite more or less broken up in mining and treatment, of a size which will not pass through a screen with openings one-quarter of an inch square. A duty of 6 cents per pound of graphite is imposed for Flake crystalline graphite (plumbago, silver lead). The term "flake" is defined as the smaller crystals of graphite, more or less broken

up in mining and treatment, of a size which will not pass through a screen with openings one-quarter of an inch square. Upon all other products, manufactured materials and compounds, containing graphite, crystalline or amorphous, not specifically provided for in this Act, a tariff of 5 cents per pound for the graphite contained therein is imposed.

Tariff

Quicksilver—*H. R. 6658*: Introduced by Mr. Lufkin, provides for a duty of 35 cents per pound upon all quicksilver imported into the United States or any of its possessions, and a duty of 35 cents per pound of mercury content upon ores or compounds of mercury or manufactured compounds.

Potash—*S. 1022*: Introduced by Mr. Henderson. This is the same bill Mr. Henderson introduced in the 65th Congress, which failed to pass the Senate, largely because of the filibuster. It is substantially the same as the bill introduced in the House by Chairman Fordney of the Ways and Means Committee, which is reviewed in these columns.

Potassium—*H. R. 4870*: Introduced by Mr. Fordney, to provide revenue for the Government and to safeguard, by a license control of imports of potassium salts and by imposing an import duty thereon, the interests of domestic potash producers. The bill gives to the Secretary of the Interior the authority to issue licenses to persons, firms, or corporations for the importation of potassium salts. The bill provides that thirty days after the approval of this act no potassium salt shall be imported into the United States without such a license. Licenses shall state the amount and kind of potassium salts and the equivalent of these salts expressed in terms of potassium oxide that can be produced therefrom. Licenses can be issued only upon condition that the applicant has purchased or contracted under a satisfactory guaranty to purchase an amount of potassium salts produced in the United States, bearing the same ratio to the amount which he is permitted to import as the estimated total domestic production bears to the difference between this estimated domestic production and the estimated total requirements of the United States. Estimates of the requirements of the United States shall be made by the Secretary of the Interior at intervals of not less than 6 months. If the Secretary shall find that domestic potassium salts are not being produced, or are not likely to be produced in time or at a cost to make them economically available in the United States in the quantity which he had estimated would be available, or whenever he shall find that the price thereof is not fair and reasonable, he may issue licenses for the importation of potassium salts in excess of the proportion fixed under this act. The bill fixes the price for the first 24 months after the passage of the bill

at not to exceed \$2.50 per unit of potassium oxide; for the succeeding 12 months \$2 per unit, and for the remaining time \$1.50 per unit. \$150,000 is appropriated for the necessary expenses of administration. Five years after the proclamation of peace, the power of the Secretary of the Interior under this act shall cease. The bill provides that upon all potassium salts imported, after five years after the proclamation of peace, from any foreign country into the United States or into any of its possessions except the Philippine Islands and the islands of Guam and Tutuila, a duty equivalent to 10 cents per unit of potassium oxide that can be produced from such potassium salts shall be collected. The term potassium "salts" includes only potassium salts of a purity of 98 per cent or less, and mixtures and compounds containing such potassium salts—muriate or chloride of potassium, sulphate of potassium, carbonate of potassium, and nitrate of potassium.

Pyrites.—H. R. 5215: Introduced by Mr. Slomp. The bill provides the following tariff duties: Pyrite and all crude iron sulphide minerals, 15 cents per unit of the sulphur content thereof. On sulphur, in whatever form, not otherwise provided in this act, 15 cents per unit of sulphur content of any product so imported.

Manganese.—H. R. 5216: Introduced by Mr. Slomp. The bill provides for a tariff duty on crude manganese ores and on manganese ores and concentrates thereof, the sum of 35 cents per unit of metallic manganese therein contained. The bill provides for a minimum duty of not less than \$10 per ton upon such ores and concentrates so imported. Upon ferromanganese and spiegeleisen and other alloys and compounds containing manganese and all other manufactured articles and materials containing manganese, not especially provided for herein, 75 cents per unit of the manganese contained therein, with a minimum duty of not less than \$50 per ton upon all such ferromanganese so imported, and a minimum duty of not less than \$30 per ton upon all spiegeleisen so imported.

Magnesite.—H. R. 5218: Introduced by Mr. Hadley. The bill provides that a duty of three-fourths of a cent per pound shall be paid upon magnesite, commercial ore, either crushed or ground; one and one-fourth cents per pound on magnesite, calcined, dead burned, and grain; 25 per cent ad valorem on magnesite brick. The bill expressly repeals Section 539 of the Tariff Act of October 3, 1913.

Zinc.—S. 6238: Introduced by Mr. McPherson. The bill provides that all zinc-bearing ores containing more than 10 per cent and less than 25 per cent metallic zinc, which are imported from any foreign country, shall be required to pay a duty of 1½ cents per pound on the metallic zinc contained therein. Zinc ores containing more than 25 per cent of metallic zinc shall pay a duty of 2 cents per pound on the metallic zinc content. No duty is imposed upon the zinc metallic con-

tent of ores containing less than 10 per cent of metallic zinc. All duties are to be estimated at the port of entry and a bond is to be given in a sum double the amount of such estimated duties for the transportation of the ores by common carrier bonded for the transportation of appraised or unappraised merchandise to properly equipped sampling or smelting establishments, whether designated as bonded warehouses or otherwise. Upon arrival at such establishment the ores shall be sampled according to commercial methods under the supervision of government officials who shall submit the samples thus obtained to a government assayer, designated by the Secretary of the Treasury, who shall make a proper assay of the sample and report the result to the proper customs officers. The import duties as provided by this Act shall be liquidated thereon. Section 2 of the bill provides that on zinc in blocks or pigs or zinc dust imported from any foreign country, a duty of 1½ cents per pound is imposed. In sheets, 1½ cents per pound; in sheets coated or plated with nickel or other metal or solutions, 2 cents per pound; old and worn out, fit only to be manufactured, 1 cent per pound. Section 3 provides for the levying on zinc, oxide of zinc, and white pigment containing zinc, but not containing lead, dry, 1 cent per pound; ground in oil, 1¼ cents per pound; sulphide of zinc, white or sulphide of zinc, 1¼ cents per pound; chloride of zinc and sulphate of zinc, 1 cent per pound. The bill repeals all existing laws fixing the rate of duty on the commodities mentioned in the Act.

Dye Stuffs.—H. R. 2706: Introduced by Mr. Longworth. The bill provides for duties upon dye stuffs. The bill provides that certain chemicals may be admitted without duty, that certain others shall pay a duty of 35 per cent ad valorem, and others a duty of 50 per cent ad valorem. The chemical terms employed are such as to be understood only by those who are familiar with the chemical intricacies of dye manufacturing and will not be of interest to the general public. Those who have special interest in this should see the original bill and copies will be supplied upon request of interested parties to the extent that same are available.

Labor

H. R. 6556: Introduced by Mr. Mays, to establish a Bureau of Citizenship and Americanization in the Department of Labor for the Americanization of naturalized citizens and amending the act establishing the Bureau of Immigration. The duty of the Bureau so created is the Americanization of persons seeking American citizenship by naturalization. A Director of Citizenship is appointed, at a salary of \$5,000 per year, and an associate director at a salary of \$4,500 per year. The duty of the bureau is the investigation of conditions and environment of permanent residents, with a view to ascertaining their sentiment as to loyalty to this country and to assist in promoting loyalty by furnishing advice and information which will increase such regard and loyalty.

\$150,000 is appropriated to carry out the provisions of the bill.

S. J. Res. 44: Introduced by Mr. Edge, which provides for the creation of a commission to devise a policy of cooperation between employers and employees in the United States.

The bill appropriates \$25,000 for the purpose of a study of the relations between the employing and working elements. It creates a commission whose duty it is to devise a general policy of counsel and cooperation between employer and employee, and to report a plan for a permanent joint council, which shall have eight members, four representing labor and four representing capital. Government employees or officials are debarred from a place on the commission. The committee shall be called the "Joint Economic Commission" and is to be appointed by the President. The commissioners are to serve without compensation, the appropriation being spent for such experts and clerical assistants as may be necessary.

H. J. Res. 114: Introduced by Mr. Sabath, authorizing and directing the Secretary of Labor to make an investigation and report regarding insurance against unemployment, invalidity, and old age. The bill appropriates \$50,000 to be disbursed by the Secretary of Labor, to investigate and report to Congress by the first Monday of December, 1919, upon the advisability of adopting a system of national insurance against unemployment, invalidity, and old age.

H. R. 4830: Introduced by Mr. Mason, provides for a Bureau of the Unemployed, to be incorporated in the Department of Labor, for a Commissioner of the Unemployed, receiving a salary of \$6,000 per year, and a Deputy Commissioner at a salary of \$4,000 per year to act in his place. The bill provides for a census at as frequent intervals as possible of the unemployed of the United States; to make and keep a classified enrollment of the unemployed by avocations; to correct and keep full records of the industrial and commercial conditions throughout the United States, especially in relation to opportunities for the employment of labor; to furnish the fullest possible information to the unemployed of opportunities for employment in any part of the United States, and to devise a plan for facilitating the movement of the unemployed to places where opportunity for employment exists. The bill provides that a report of such investigation shall be made to Congress and the President annually, and oftener if requested. It also provides for the cooperation of the Post Office Department, the Interior Department, the Agricultural Department, the Department of Commerce and the United States Railroad Administration, in taking the census and securing the information necessary.

H. R. 3474: Introduced by Mr. Riordan, to repeal the literacy test. The bill provides that three months after the passage of this Act, in

addition to the aliens now excluded from admission to the United States, all aliens over sixteen years of age, physically capable of reading, who cannot read the English language or some other language or dialect, shall be excluded from admission to the United States. It provides that an alien who is now a citizen of the United States may bring in his father, wife, mother or widowed daughter, whether such relatives can read or not. It provides for the use of the immigration inspector slips containing thirty or forty words of ordinary use, which each alien is required to read or print in such language or dialect as he may best know. The bill does not apply to those persons who are seeking admission to avoid religious persecution.

S. 1472: Introduced by Mr. Harrison, to prohibit immigration for a period of five years. The bill provides that immediately upon the passage of the Act all immigration be stopped for a period of five years. The bill does not apply to foreign governmental officials, their families, attendants, servants, etc., ministers or religious teachers, lawyers, students, authors, chemists, civil engineers, physicians and travelers for pleasure, business or curiosity. The bill also provides for seamen of foreign birth and prescribes fines for the violation of the Act.

S. 1442: Introduced by Mr. Kenyon to provide for the establishment of a national employment system and for cooperation with the states in the promotion of such system and to regulate the expenditure of moneys that shall be appropriated for such purposes. The bill creates, in the Department of Labor, a bureau to be known as the United States Employment Service, and provides for a director of such bureau at a salary of \$5,000 per year, together with a woman assistant director general who shall receive a salary of \$3,000 per year. The duty of the bureau shall be to establish and maintain a national system of employment offices. They shall coordinate the public employment offices throughout the country by furnishing information as to labor conditions, by maintaining a system for clearing labor between the several states, establishing uniform standards, policies and procedure, and by assisting in the transportation of workers to such places as may be deemed necessary for the purpose of securing employment. The bill appropriates four million dollars for the fiscal year ending 1920, and for each fiscal year thereafter up to and including the fiscal year ending June 30, 1922. The bill provides that the Secretary of Labor allot not less than 75 per cent of the money for the maintenance of public employment offices in the several states. When the state shall make an appropriation for the maintenance of a system of public employment offices, or is prepared to maintain such a system in cooperation with the United States Employment Service, there shall be paid to the Treasurer of the State, upon certificate to the Secretary of the Treasury, an amount

not exceeding the amount allotted for the current year to such state by the Secretary of Labor.

The amount so appropriated by the state shall not be less than 25 per cent of the allotment according to the population, made by the Secretary of Labor, and shall not be less than the amount so appropriated by such state for public offices in the year 1918, and not less than \$5,000. The Secretary of Labor is authorized to prescribe rules and regulations and standards of efficiency for conducting such offices, and it shall be the duty of the Secretary of Labor to ascertain whether the system of Public Employment Offices maintained in each state is conducted in accordance with the rules and regulations prescribed by him.

Public Lands

S. 1257: Introduced by Mr. Myers, providing for agricultural entries on coal lands. Upon passage of the act, all unreserved public lands, exclusive of Alaska, which have been withdrawn or classified as coal lands, shall be subject to entry, selection or sale under any of the non-mineral public land laws, applicable to the particular lands desired if not containing coal, and to withdrawal under the Reclamation Act, whenever such entry shall be made with a view of obtaining or passing title with a reservation to the United States of the coal in such lands, and of the right to prospect for mine and recover same.

S. 1729: Introduced by Mr. Smoot, permitting minors of the age of eighteen or over to make homestead entry on the public lands of the United States. Any minor of eighteen years or more is permitted to make homestead entry but is not permitted to make final proof upon such entry or to receive patent therefor until he or she shall have attained the age of twenty-four years. The same laws as to cultivation and improvement of the land as apply to all entrymen are enforced, but they will not be required to establish or maintain a residence thereon until they have reached the age of twenty-one years.

H. R. 6550: Introduced by Mr. Mays, providing that upon passage of the bill no public lands of the United States containing minerals shall be withdrawn by Executive proclamation or otherwise, and no reserves of any character or description covering or including within its limits lands of the United States containing minerals shall be created or established except by Act of Congress.

H. R. 6646: Introduced by Mr. Welling, to cede the unreserved public lands to the several states. All unreserved public lands are ceded to states, except where they have been entered pursuant to law, and for which rights of entrymen or claimants may have been initiated. Upon relinquishment, however, the land is subject to the provisions of the act.

S. 2129: Introduced by Mr. Smoot to amend an act to provide for the repayment of certain commissions, excess payments and purchase

moneys paid under the public land laws. The bill provides that where purchase moneys and commissions paid under any public land law have been covered into the Treasury under any application to make filing, location, entry, or proof, etc., such purchase moneys and commissions shall be repaid to the person who made such application, etc., in all cases where such application, entry, or proof has been or shall be rejected, and that the applicant shall not be guilty of fraud in connection with such application. It provides that a request for repayment of purchase moneys and commissions must be made within two years from the rejection of the application.

Section 2 of the bill provides that the Secretary of the Interior, when proper proof is presented to him that any person has made payments to the United States under the Public Land Laws in excess of the amount he is lawfully required to pay under such laws, that such excess shall be repaid to him. Request for repayment must be made within two years after the patent has been issued for the land. Section 3 of the Act provides that the Commissioner of the General Land Office shall ascertain the amount of any excess moneys or commissions, in any case where repayment is authorized by this statute, and that the Secretary of Interior shall at once certify such amount to the Secretary of the Treasury, who is authorized to make repayment of the amount specified. The power of the bill is vested in the Secretary of Interior, who is authorized to make rules and regulations necessary for the carrying out of the Act.

S. 2190: Introduced by Mr. Smoot to authorize the consolidation of government lands and of privately owned lands, and for other purposes. The power of the bill is vested in the Secretary of the Interior, who is authorized in cases where privately owned lands are situated in noncontiguous bodies or areas within public domain, including reservations, or within oil, coal or other withdrawals, to exchange public lands of the United States either within or without such reservations or withdrawals, for such privately owned lands to the end and with the object that as nearly as practicable the lands in private ownership and those held by the Government shall each form single bodies. The lands so exchanged must be of approximately equal character and value, and the exchange can be made only in the event that the public interests are benefited. The land to be conveyed to the United States by any one landowner under such exchange shall be so conveyed by a single act or instrument of conveyance, and the lands to be conveyed to the private owners in exchange therefore shall be described in a single list or schedule and conveyed by a single patent.

S. 2189: Introduced by Mr. Smoot to provide for agricultural entries on coal lands in Alaska. Upon the passage of the Act, homestead claims may be initiated by actual settlers for public lands of the United States in Alaska known to contain workable coal, oil, or gas deposits, or that may be valuable for the coal, oil, or gas contained therein, and which are not otherwise

reserved or withdrawn. All such homestead claims are to be patented with the understanding that the title for the coal, oil, or gas, is vested in the United States, which has the right to prospect for, mine and remove the same. Any settler who has initiated a homestead claim in good faith, on lands containing workable deposits of coal, oil, or gas, may perfect the same under the provisions of the laws under which the claim was initiated, but he shall receive a limited patent therefor. Section 2 of the bill provides that, upon satisfactory proof of full compliance with the provisions of the laws under which the entry is made, the entryman shall be entitled to a patent to the lands entered by him, which patent shall contain a reservation to the United States of all the coal, oil, or gas in the land so patented, together with the right to prospect for, mine and remove the same. These deposits are subject to the disposal by the United States in accordance with the provisions of the laws applicable to coal, oil, or gas deposits in Alaska in force at the time of such disposal. Any person qualified to acquire coal, oil, or gas deposits, or the right to remove same, shall have the right at all times to enter upon the lands entered or patented, for the purpose of prospecting for coal, oil, or gas, upon the approval of the Secretary of the Interior of a bond or undertaking to be filed with him as security for the payment of all damages to crops and improvements on such lands by reason of such prospecting. The owner of the limited patent shall have the right to mine the coal for use on the land for domestic purposes at any time prior to the disposal of such deposits by the United States. The bill expressly provides that nothing therein shall conflict with the Soldiers Homestead Laws.

Public Lands and Soldier Settlement

H. R. 5993: Introduced by Mr. Kelly of Pennsylvania, to provide for the emergency arising out of the demobilization of soldiers, sailors, and marines, and the discharge of workers from war industries and other occupations by securing therefor permanent opportunities for profitable employment by means of a national construction service organized for the systematic extension of useful public works and the development of natural resources, and for other purposes. The bill appropriates the sum of \$100,000,000 to be expended under the direction of the President of the United States, to provide for the immediate and profitable employment on public construction and development necessary or desirable in the public interest, of soldiers, sailors or marines returned from the military or naval forces of the United States. The President of the United States is authorized to appoint a citizen to act as director of the work, to be known as the Director of Public Construction, and to furnish him with the necessary office force and equipment and to pay an annual salary of \$5,000 per year. There is also to be created an Advisory Board to be known as the National Board of Public Construction, which shall consist of the President of the United States, and the Secretaries of Labor, Agriculture, Interior, War, and the

Postmaster General. The President is given the power to make all rules and regulations for carrying out the work, including the provisions for wage standards and working conditions for labor employed in the operations authorized in the Act. Such wage standards are to be approved by the Secretary of Labor. Preference is given to returned soldiers first, to workers associated with the active conduct of the war second, and citizens generally, third. In order to secure the immediate and profitable employment of returned soldiers, sailors and other workers, the President is given power to organize a service or body of workers to be known as the United States Construction Service, which shall act under the general supervision of the Director of Public Construction, to designate the location in accordance with existing plans of the Post Office Department, of a national system of permanent post roads; to utilize the construction service for the construction, improvement and maintenance of the roads; to arrange for the transfer by the Secretary of War of such motor vehicles, camp buildings, and other war material and equipment as may be unsuitable for the purposes of the War Department, for use in the construction, improvement and maintenance of the post roads; to provide for the establishment of motor transport and postal routes; to organize a system of marketing facilities for the collection and delivery through the Postal Service and the public school buildings of food and other products from producer to consumer. These marketing facilities as soon as they are organized shall be turned over to the Post Office Department to be operated as a part of the Postal Service. The construction service is to administer all lands acquired and all buildings and other property acquired, constructed or being constructed by the Emergency Fleet Corporation and the Housing Corporation. In order to initiate a proper policy for utilizing the land and natural resources for the permanent and profitable employment of returned soldiers and other workers, the President is authorized to experiment in establishing one or more actual communities on agricultural lands, and for the purpose to provide for the efficient laying out, reclaiming, preparing, developing and organizing of such lands for community settlement, including the providing and equipping of ready-made farm buildings, and the furnishing of stock, machinery and seed; the establishment, maintenance and operation of a demonstration farm for agricultural training; the organization of cooperative buying, selling, storage, insurance, and allows the making of loans and means for the settlers' welfare. He is further authorized to experiment in organizing, within the national forests, one or more actual logging or milling operations or both, which in each case shall be based upon a continuous yield of timber or wood to the end that permanent communities of logging and mill workers be established; provide all necessary roads, flumes, and other transportation facilities, mills, buildings, and other plants, and equip and operate the same and sell the product. He is authorized to ex-

periment in developing in the public domain in the United States or Alaska, one or more coal mining enterprises, each enterprise to be so conducted as to maintain a suitably planned and organized community of workers. Investigation of possibilities and practicable and comprehensive means for the control of floods is also provided for. For the purpose of carrying out the experiments provided for, the President is authorized to reserve from entry or patent under the homestead or other laws, any portion or portions of the public domain of the United States; to purchase, or acquire by lease or by gift, any improved or unimproved land, or any right, title or interest therein, houses, buildings and parts thereof; to select settlers from the applicants for lands, and to supervise such colonies when organized; to rent or lease, upon such terms and conditions as may determine any area of land, or any houses, buildings, improvements, or parts thereof, which have been reserved, acquired, or constructed as provided in this Act. All states interested are allowed to cooperate with the President upon proper agreement. Not more than 50 per centum of the cost involved in any cooperative enterprise shall be paid from the appropriations of the Act.

S. 863: Introduced by Mr. Smoot, to provide employment and rural homes for those who have served with the military and naval forces of the United States, through the reclamation of lands to be known as the National Soldier Settlement Act. The bill provides for the reclamation of lands to be used by the honorably discharged soldiers of the Regular Army Reserve, and by former American citizens who served with and were honorably discharged from the military or naval forces of any of the nations allied against the Central Powers. The power of the bill is vested in the Secretary of the Interior who may acquire by gift or purchase, deed in trust or otherwise, the necessary lands. No lands shall be acquired unless the price be paid and the conditions under which they are acquired shall be approved by a representative of the state in which the lands are located, an appraiser designated by the Federal Farm Loan Board, and the Secretary of the Interior. The Secretary is given authority to do and perform all work necessary for the permanent reclamation and development of the lands, and shall as far as possible utilize the service of soldiers for this purpose. The Secretary shall withhold at least 10 per cent of the wages paid soldiers for work on the project to apply upon payment of the obligations of the soldiers, which amount will be returned to the soldier in case he does not purchase a farm allotment when the allotments are offered for sale. All amounts so withheld shall bear interest at the rate of 4 per cent. The Secretary is authorized to advance to soldiers up to \$1,200 for necessary improvements. Proper allowance is made for schools, churches, and community centers. Preferential right is given to the soldiers who have been employed in the development of the projects. The sale price

shall be fixed with a view to repaying the total cost of each project. Applicants are to pay 5 per cent of the purchasing price upon entering into the contract. The balance is to be paid in amortizing payments during a period not to exceed forty years. Sums advanced for improvements shall be repaid in amortizing payments extending over a period to be fixed by the Secretary not to exceed twenty years. These payments shall bear 4 per cent interest annually. Patents or deeds to project lands issued within ten years within the date of contract of sale, shall contain the condition that no transfer, assignment, mortgage, or lease shall be made valid without the approval of the Secretary. The Secretary is authorized to make short-time loans not to exceed \$800, at any one time, to soldiers to purchase the necessary live stock. Such loan shall bear 4 per cent interest. In the case where the state furnishes 25 per cent of the necessary funds, the Secretary of the Interior may authorize the state, subject to his general supervision, to carry on the subdivision of lands, improvement of farms and the aid and direction of development after settlement. The Secretary is authorized to provide for reimbursement of funds so provided by the state.

H. R. 6043: Introduced by Mr. Hastings, to provide homes for soldiers, sailors, and marines and for other purposes. All honorably discharged soldiers, sailors and marines, who have served with the forces in the war with Germany, will upon the passage of this Act be entitled to enter a tract of public land, under the provisions of the public-land laws, and shall be entitled to make said entry without payment of fees and commission as now provided by law. The Secretary of the Interior is hereby authorized to reserve the entry for a period of two years from the passage of the Act, of any part or portion of the public domain, during which time the soldiers, sailors, and marines shall have preferential right to enter. The Secretary of the Interior is further authorized to waive the time limit to residents on homesteads, as required of other settlers. The bill amends the fifth paragraph of Section 12 of the Act approved July 17, 1916, providing capital for agricultural development, etc., in that it provides that no loan shall exceed 50 per cent of the value of the land mortgaged, and 20 per cent of the value of the permanent insured improvements thereon. Loans may be made to honorably discharged soldiers, sailors, and marines, who have served in the war with Germany, to the amount equaling 100 per cent of the value of the land and permanent, insured improvements thereon. The loans shall be divided so that the first mortgage shall be taken on the land and the improvements in each case to secure the note for a first loan in an amount not to exceed 50 per cent of the value of the land mortgaged, and 20 per cent of the value of the permanent, insured improvements thereon. Such notes to be issued by the farm-loan banks as security for the farm-loan bonds. The bonds shall be non-taxable, and shall bear interest at not to exceed

4½ per cent, and be sold for not less than par value, the money to be loaned to honorably discharged soldiers, sailors and marines at the same rate as paid upon the notes secured by the first mortgages.

Interior Department

H. R. 6551: Introduced by Mr. Mays, establishing a branch of the Interior Department in the Western States and to transfer to such branch certain bureaus and offices of the Interior Department. The bill provides for the establishment at a suitable place in one of the public-land states west of the Mississippi River, a branch of the Interior Department, to which branch is to be transferred, from the District of Columbia, the offices of the Commissioner of the General Land Office, the Geological Survey, the Bureau of Mines, the Reclamation Service, Commissioner of Indian Affairs, and the National Park Service. It also provides for the repealing of the Act which transferred the forest reserves to the Department of Agriculture. \$1,000,000 is appropriated to carry out the provisions of the Act, which shall take effect immediately.

National Forests

H. R. 6542: Introduced by Mr. Mays, repealing the Act of Congress approved February 1, 1905, and transferring the National Forests from the Agricultural to the Interior Department.

Anti-trust Laws

S. 1383: Introduced by Mr. Henderson, to amend Section 4 of the Act to regulate commerce. This bill makes it unlawful for any common carrier engaged in interstate commerce to charge or receive any greater compensation in the aggregate for the transportation of passengers of the same class, or of goods, wares, merchandise or property of a like class for a shorter than a longer distance over the same line or route in the same direction, or to charge any greater compensation as a through rate than the aggregate of the intermediate rates for passengers or freight. The bill specifically states that it in no way authorizes a common carrier to charge or receive as great compensation for a shorter as for a longer distance.

Industrial Relations

H. J. Res. 121: Introduced by Mr. Kelley of Pennsylvania, authorizing the President of the United States to call a national conference for the consideration of industrial problems and the amelioration of differences between capital and labor. Under the provisions of this Act, the President is authorized and directed to call a national conference to meet at such place as may be designated by him, at an early date to also be named by him, to be composed of the following named persons to represent both employes and employers of capital and labor: E. H. Gary, William H. Johnston, Frank P. Walsh, Charles E. Hughes, A. B. Garretson, William K. Vanderbilt, Franklin K. Lane, William B. Wilson, John D. Rockefeller, Samuel Gompers, Daniel Guggen-

heim, Charles H. Moyer, J. P. Morgan, Andrew Furuseth, F. S. Peabody, Frank J. Hayes, J. Ogden Armour, J. Fitzpatrick, E. L. Stotesbury, W. D. Mahon.

Water Power

H. R. 3184: Introduced by Mr. Esch, creating a Federal Power Commission. This bill was unanimously reported from Committee, June 28. There have been a number of bills introduced upon this subject, but the Esch bill is the only one to receive serious consideration. The bill provides that the Secretaries of War, Interior and Agriculture shall comprise the Federal Power Commission. An executive secretary is provided for at a salary of \$5,000 per year. The work of the commission is taken care of by the clerical forces of the three departments. One hundred thousand dollars is appropriated for the purpose of the act.

The commission is empowered to make investigations and collect data concerning the power industry; to cooperate with various departments who shall turn over to the commission such records, papers, etc., as may be valuable to it, and detail their experts to work with the commission; to make public the information so obtained and submit to Congress a classified report of its activities.

The commission is authorized to issue licenses for the purpose of constructing, operating and maintaining water power projects. Licenses are to be issued only after a finding by the commission that it will not interfere with work already being done. Preliminary permits are authorized, to provide opportunity for applicants to secure data and perform the necessary duties pertaining to securing licenses. Upon filing an application for preliminary permit, notice of application must be given in writing to the state or municipality likely to be interested in the project, and a notice must be published for eight weeks in a daily or weekly newspaper in the county where the project is contemplated.

Rules and regulations establishing a system of accounts are provided, and a fine of \$2,000, or imprisonment, or both, is provided for violation of such rules.

Licenses are issued for a period not exceeding fifty years, and may be revoked only upon violation of the Act and altered upon mutual agreement after 90 days' public notice. Annual rental and provisions for operation are to be fixed by the commission.

Numerous provisions are provided safeguarding the Government, and the requirements of each applicant are too lengthy to be given in this space. Copies of the bill, however, will be provided interested readers upon request.

Mining on Indian Reservations

H. R. 2480: To make appropriations for the current and contingent expenses of the Bureau of Indian Affairs, and to provide for the mining of minerals on Indian Reservations. Section 26 of the bill authorizes the Secretary of the Interior, under general regulations to be fixed by

him and under such terms and conditions as he may prescribe, to lease to citizens of the United States or to any association of such persons or to any corporation organized under the laws of the United States, any part of the unallotted lands within any Indian reservations, within the states of Arizona, California, Idaho, Montana, Nevada, New Mexico, Oregon, Washington, or Wyoming, heretofore withdrawn from entry under the mining laws, for the purpose of mining deposits of gold, silver, copper and other valuable metaliferous minerals, which leases shall be irrevocable, except as provided in the bill. Mining claims may be located in the same manner as mining claims are located under the mining laws of the United States. The locators of such claims shall have a preference right to apply to the Secretary of the Interior for a lease, of any mining claim, and such locator who shall fail to apply for a lease within one year from the date of location shall forfeit all rights to such claim. Duplicate copies of the location notice shall be filed within sixty days with the superintendent in charge of the reservation on which the claim is located, and application for a lease under the bill may be filed with the superintendent for transmission to the Secretary of the Interior. Lands containing spring water or other bodies of water needed or used by the Indians for watering live stock, irrigation, water-power, etc., are excluded from the provisions of the bill. Leases are to be for a period of twenty years, with preferential right in the lessee to renew for successive periods upon reasonable terms to be prescribed by the Secretary of the Interior. The lessee may be permitted at any time to make written relinquishment of all rights under such a lease, and upon acceptance be released of all future obligations under the lease. Tracts of unoccupied land not to exceed 40 acres, may be leased at a rental of not less than \$1 per acre for camp sites, milling, smelting, and refining works, etc. For the privilege of mining or extracting the minerals, the lessee shall pay to the Government, for the benefit of the Indians, a royalty of not less than 5 per cent of the net value of the output of the minerals at the mine, due and payable at the end of each month succeeding that of the extraction of the minerals from the mine, and an annual rental payable at the date of such lease and annually thereafter of not less than 25 cents per acre for the first year, 50 cents for the second, third, fourth and fifth years, and not less than \$1 per acre for each and every year thereafter during the continuance of the lease, except that such rentals for any year shall be credited against the royalties as they accrue for that year. In addition to the payment of royalties and rentals, the lessee shall expend \$100 in development work. No timber shall be cut upon the reservation except for mining purposes, and then only after first obtaining a permit from the superintendent of the reservation and upon payment of the fair value thereof. The Secretary of the Interior is authorized to examine the books and accounts of the lessees and to require them to submit statements, reports, etc., regarding the cost of mining. All moneys received from royalties and rentals shall be deposited in the Treasury of the United

States to the credit of the Indians. The bill also provides that any unallotted lands may be leased to the Indians who have been declared by the Secretary of Interior as competent to manage their own affairs. The Indian Appropriation Bill, which carries these provisions for mining upon Indian Reservations passed the House on May 26, the Senate on June 6, and the Conference Report was agreed upon on June 10. The bill now will go to the President of the United States for his signature.

Department of Public Works

H. R. 6649: Introduced by Mr. Reavis, of Nebraska. This bill, prepared by the Engineering Council, provides that the Department of the Interior be changed to the Department of Public Works, and that the now Secretary of the Interior be designated as the Secretary of Public Works. When the present term of the Secretary of the Interior shall expire, all subsequent occupants shall by training and experience be qualified to administer the affairs of the department. Except as hereinafter stated, all bureaus now included under the Interior Department are transferred to the proposed Department of Public Works.

The Patent Office under the Act is transferred to the Department of Commerce; the Bureau of Pensions to the Treasury; the Bureau of Education to the Labor Department; the Bureau of Indian Affairs, and Board of Indian Commissioners, to the Labor Department, with the special proviso that all engineering and construction work, and mineral land surveys now formed by the Bureau of Indian Affairs, shall be performed under the Department of Public Works.

The Department of Public Works shall take over the Supervising Architect's office, now controlled by the Treasury Department, the Construction Division of the United States Army, River and Harbor Improvements, the Mississippi River Commission, and the California Debris Commission, now controlled by the War Department. Engineer Officers now assigned to non-military work are to be detailed for duty under the Department of Public Works, until civil transfer has been satisfactorily accomplished.

Four Assistant Secretaries of Public Works are provided for, each specially qualified for his particular work, and who can be removed only for inefficiency or legitimate cause.

Leasing

S. 1269: Introduced by Mr. Smoot, to promote the mining of coal, phosphate, oil, gas and sodium on the public domain.

This bill is similar in its provisions to the bill discussed in these columns last month, except that it provides solely for the leasing of the lands and prohibits the sale thereof.

Senator Smoot is firmly of the opinion that we must have either a leasing policy or an ownership policy, and has drawn his bill around that idea.

The bill was referred to the Committee on

Public Lands, from which it is expected to be reported at an early date.

Industrial Exposition

S. 1314: Introduced by Mr. Spencer to establish an International Exposition of the United States of America. The bill provides for the establishment of an International Exposition of the United States of America to be located in or near the District of Columbia, in the interest of the commerce, mining, industry, agriculture, labor, education, arts and science of the world. The building sites are available to any state in the United States and to any foreign nation, under such restrictions and regulations as Congress or the Board of Trustees may provide. The exposition is to be managed by a board of ten trustees, consisting of the President of the Senate, Speaker of the House of Representatives, four members of the Senate and four members of the House, appointed by the Speaker of the House, who are to hold office for terms of six years. The original appointees shall determine three of their number to hold office for the full term of six years, three to hold office for four years, and two to hold office for two years. There shall be an Advisory Board which shall consist of Governors of such States of the United States and of the representatives of each nation as may erect and maintain buildings in connection with the exposition. The power of the bill is vested in the Board of Trustees, who have full power to plan the exposition buildings, select sites, etc. \$100,000 is appropriated for the necessary expenses.

Bolshevism

S. 1720: Introduced by Mr. King, provides that any association, organization, or corporation which proposes to bring about any social, industrial, or economic change within the United States by the use of force, violence, etc., be declared an unlawful association. Section 2 of the bill provides that any person who shall act as an officer of any such unlawful association shall be punished by imprisonment for not more than ten years or by a fine of \$5,000, or both. Section 3 provides that any person who knowingly prints, publishes or circulates any book, pamphlet, paper, circular or card, etc., in which is advocated physical force, violence or injury to person or property, shall be subject to a ten-year imprisonment, or \$5,000 fine, or both. It provides that a fine of \$500 or one year in prison, or both, may be imposed upon any owner, agent, or superintendent of any building, room, or place who knowingly permits therein any meeting of such unlawful association.

Education

S. 816: Introduced by Mr. Owen to provide for public education upon political questions and for the dissemination of information upon political issues and matters of a political nature of public interest by an authorized publicity pamphlet. The bill is to be known as the Federal Publicity Pamphlet Act. It provides for two pamphlets, the first to be issued prior to the nomination of Members of Congress to be known as "Federal Publicity Pamphlet Number 1," and the second

to be issued prior to the general election to be known as the "Federal Publicity Pamphlet Number 2."

The pamphlet shall contain information concerning candidates for nomination as Senators or Representatives of the Congress of the United States, which information may be presented to the Public Printer which is to be filed not later than the fortieth day preceding the date when delegates of such convention are selected, together with his portrait or cut and reasons why he would be nominated. Such statements shall not exceed three pages for a Senator and two pages for a Representative. The bill prescribes rules and regulations about the distribution of the pamphlets, the number of pamphlets to be printed, etc.

Mining Claims

H. J. Res. 76: Introduced by Mr. Raker to suspend the requirements of annual assessment work on mining claims during the continuation of the war in which the United States is now engaged and until midnight of December 31 of the year following that in which such war is concluded. The bill provides for the suspension of the law which requires that \$100 worth of labor be performed or improvements be made during each year. The claimant in order to secure the benefit of the bill must file a notice, in the office where the location is recorded, of his desire to hold his mining claim.

H. R. 5135: Introduced by Mr. Hayden, provides that mining claims for deposits bearing gold, silver, lead, copper or other valuable minerals, occurring in disseminated bodies or deposits having no surface outcrop, shall be subject to entry in areas not to exceed 20 acres for each claim, but no exterior surface boundary of any such claim shall exceed 1,320 feet in length. The location of such claim shall be completed by erecting at each corner a substantial monument, and the posting thereon of a notice of location under the provisions of this act, and the recording such notice in the office of the county recorder within 30 days after such posting. Until patent has been issued, not less than \$100 worth of labor shall be expended or improvements made.

S. 47: Introduced by Mr. King, provides a new method of obtaining patent to a mining claim. Applicant must prepare a statement under oath showing his compliance with the terms of the act, together with a plat of the claims, showing accurately the boundaries, which must be distinctly marked by monuments on the ground. This plat, together with notice of application, must be placed in a conspicuous place on the land. Copy of the statement and plat is to be filed in the proper land office, and in a court of competent jurisdiction as and for a complaint or declaration, setting forth that he has located certain claims described in the complaint and has performed all acts necessary to entitle patent. The register of the land office, upon receiving the statement,

shall advise the Commissioner of the General Land Office, and if the lands are not open to entry, or the applicant for patent has not properly complied with the law, or for any reason the claimant is not entitled to patent, the commissioner must set up such matters as defenses by pleadings denying that the claimant is entitled to patent. The commissioner or his representative must be present at the trial.

Upon the filing of such a complaint, claimant shall publish a notice for sixty days that he is applying for patent for certain mining claims, and giving notice to all persons who may have any adverse claims to present same by answer or pleadings in such proceedings. Upon compliance with the above, the court must appoint a day for the hearing of such proceedings, at which hearing the applicant may present proof of his compliance with the law, that the land is mineral in character, and that he has made actual discovery of mineral thereon, that he has made improvements to the value of at least \$500 and any other necessary facts.

If there are adverse claims to possession, the court has the power to determine the right of possession, which is final, except that it be shown that the applicant has failed to comply with the terms of this act.

After such finding and judgment the claimant may without further notice file a certified copy of the judgment roll with the register, and pay the receiver \$5 per acre for the claim, together with proper fees, whereupon patent shall be issued.

SPEEDY IMPROVEMENT OF PYRITES SITUATION, IS PREDICTED

As a result of further curtailment in acid manufacture the demand for pyrite and sulphur is not active. Many of the large consumers still have sufficient stocks on hand to take care of their immediate needs; consequently they are not disposed to make contracts for new material, preferring to wait until conditions are more settled. The producer, therefore, is confronted by a restricted demand and finds it difficult to dispose of his product unless he happens to hold long-term contracts, providing for his entire output.

It is thought by those who have an intimate knowledge of the industry that conditions will speedily improve, and within the next two or three months there should be a brisk demand for both pyrite and sulphur.

The outlook in some of the industries that use large quantities of sulphuric acid, particularly the oil and steel industries, is encouraging.—Bureau of Mines Minerals Investigations.

On June 13, Samuel A. Taylor, a director of the American Mining Congress, was given the honorary degree of Doctor of Science at the University of Pittsburgh.

MINING DECISIONS

JURISDICTION OF STATE COURTS OVER CONTRACTS

A miner in the State of Washington contracted with a corporation, organized in the same state, for work to be done on property owned and operated by a Washington corporation in the State of Idaho. This work was to be paid for part in cash and in part from the proceeds of the mine, contrary to the statutes of the State of Washington.

The work was performed, the corporation made the cash payment specified, whereupon the miner filed suit in the State of Washington for the portion of the services for which he had agreed to accept payment from the proceeds of the mine. The Supreme Court of the State held, however, that the contract was valid, so far as the State of Idaho was concerned and that neither party could invoke the jurisdiction of the State of Washington to declare the contract void, because in violation of the Washington statute. *Hatcher v. Idaho Gold and Ruby Co.*, 159 Pacific 107.

DUE DATE FIXED FOR PAYMENTS ON OIL LEASES

The due dates for the payments of rentals due on oil leases because of delay in commencing or completing drilling contracted for have been fixed. The recent decisions hold first that when the lease provides for a rental for a stated period, if drilling is not commenced within a fixed time, then the payment or tender of the rental must be made before the beginning of this fixed period. Second, where rentals for delay are to be paid if drilling has not been completed then a fixed time payment or tender of such rentals may be made at any time before the expiration of the fixed time.

RELOCATION CARRIES TITLE TO IMPROVEMENTS

A Mining Company sold mill and buildings located on an unpatented mill site, held in connection with unpatented lode claims, giving to buyer the right to remove the buildings. The Mining Company did not perform the annual assessment work on its claims and a third party made a valid relocation of the ground, the boundaries of which included the mill and other buildings and improvements.

In the action which arose between the purchaser of

these buildings and the relocater of the mining claims as to who held title for the buildings and the improvements, the court decided that the original owner of the buildings (the Mining Company) lost its right to the buildings by its failure to perform its assessment work and that, upon relocation, the right of the first Mining Company was terminated and the relocater acquired the right of possession in the land and necessarily in the buildings. The court, therefore, invokes the well-known principle of the law in which a man cannot pass a better title than he possesses and the purchaser of the buildings from the Mining Company forfeited his right in the property at the time the Mining Company forfeited its right in the possession of the ground.—*Watterson v. Cruse*, 176 Pacific 870.

MINING CLAIM WATER RIGHTS

Recent decisions clarify the rights to the use of water for mining under Section 2339 of the United States Revised Statutes. A person cannot locate a mining claim, including within its limits a spring, and maintain his right as against another Mining Company which has already appropriated the waters from this spring and applied them to its own uses even though the spring was part of the public domain. So also a person residing on public land who had developed and piped the flow from a spring can maintain his right as against any other person who has no better title to the land than he himself possesses. Priority of use seems to be the rule governing these decisions. *McKenzie v. Moore*, 176 Pacific 568.

KNOWLEDGE GIVES CONSENT

The owner of a mining property knew that a third person had relocated and was developing his property. Nevertheless he remained silent and failed to assert any right for more than two years. After the relocater had expended large amounts of money and had mined and shipped valuable ore, the original owner filed his first assertion of claim against the relocater. The court held that the original owner had, by his conduct and knowledge of the facts, abandoned the claims relocated.

JONES-REAVIS BILL PROPOSES DEPARTMENT OF PUBLIC WORKS

Far-reaching changes in the executive machinery of the federal government are proposed in bills introduced in each house of Congress on June 25. The federal Department of the Interior will become the Department of Public Works, if the legislation proposed is enacted. The main idea is to assemble all engineering activities of the Government in one department.

Such bureaus of the Interior Department as are non-engineering in character are to be placed under the jurisdiction of appropriate departments, while engineering bureaus from other departments are to be included in the Department of Public Works. The bill proposes that the Patent Office is to be removed from the Interior Department and placed under the Department of Commerce. The Bureau of Pensions is assigned to the Department of the Treasury. The Bureau of Education goes to the Labor Department. The Bureau of Indian Affairs also is transferred to the Department of Labor, with the proviso that the engineering and construction work and the land and mineral surveys now performed under the direction of the Bureau of Indian Affairs are to be prosecuted under the Department of Public Works. St. Elizabeth's Hospital and the Freedman's Hospital in this city are assigned to the Treasury Department. Columbia Institution for the Deaf and the Howard University go to the Bureau of Education, under the provisions of the bill.

On the other hand, the Department of Public Works is slated to absorb the Supervising Architect's Office of the Treasury Department; the Construction Division, River and Harbor Improvements, Mississippi River Commission, and California Debris Commission of the War Department; the Bureau of Standards and the Coast and Geodetic Survey of the Department of Commerce; the Bureau of Public Roads and the Forest Service of the Department of Agriculture.

The bill provides that the Secretary of Public Works "shall by training and experience be qualified to administer the affairs of the department and to evaluate the technical principles and operations involved in the work thereof." The measure excepts from the foregoing provision the cabinet officer who is at the head of the department at the time of the passage of the bill.

Four assistant secretaries, each to be paid \$7,500 per annum, are provided and their duties outlined. One assistant secretary is to have administrative jurisdiction over all matters of engineering design and construction. Another is to have charge of architectural design and construction. The third is to have jurisdiction over all scientific work and surveys, while the fourth assistant secretary is to be in immediate charge of all land and legal matters. The assistant secretaries are charged with the duty of coordinating and bringing into efficient relationship all the activities of the department

so that it may be harmoniously and efficiently administered.

An important feature of the bill is the proviso that engineer officers of the U. S. Army detailed on non-military work are to be assigned by the Secretary of War to like duties under the new department, for not over two years. This enables the Secretary of Public Works, it is said, to make gradual transfer of improvements and instrumentalities to civil administration without detriment to public interest. Members of the Corps of Engineers may, under the direction of the Secretary of Public Works, be detailed by the Secretary of War to temporary duty in the new department for such instruction, training and experience as is desired.

High-Speed Steel

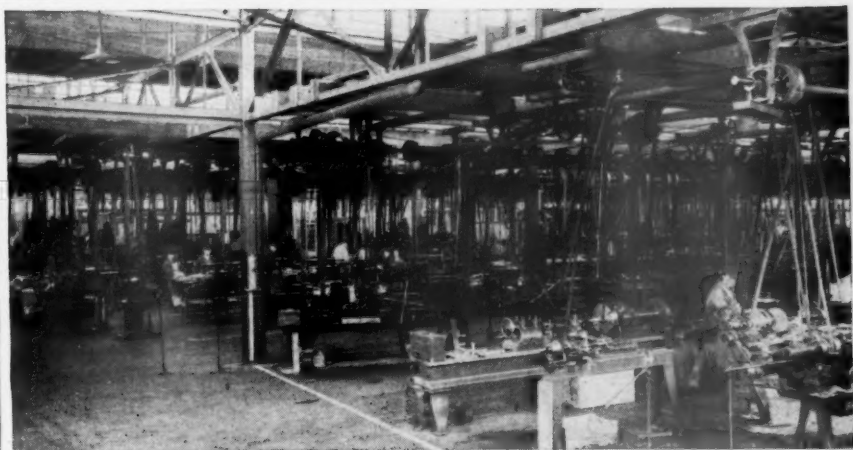
Roy C. McKenna, of Pittsburgh, is the author of the following interesting statement, made to the Ways and Means Committee:

"That penknife contains probably the best grade of carbon tool steel that a manufacturer can make, which would sell at about 23 cents a pound. If that were heated over a blaze of a match it would lose its temper and would not cut wood. High-speed steel gets its value from the fact that tungsten imparts the property to it of maintaining its hardness at red heat. I have actually seen lathes which had a voltmeter showing 60 horsepower imparted to the lathe. All that power, excepting that used by the belts and in the friction, had to be radiated as heat from the point of that tool. The value of high-speed steel is absolutely due to the fact that tungsten alone, of all the minerals known in the world, gives that property to steel. A workman could light his cigar, if he had a cigar to light, from the point of a tool while it is working.

In the plant that is affiliated with ours, working on 6-inch British shells, we have removed, by drilling, 51½ pounds of metal in 20 minutes, or over 2½ pounds a minute. Secretary Lane, I think it was in December, 1915, in the National Geographical Magazine, stated that with high-speed steel one man and one lathe could do the work of five men and five lathes. It may be interesting for you to know that back in 1904 or in 1905 the first high-speed drill was made. The drill was tested by the plant of the Carnegie Steel Co. on armor plate, and the result showed that the operator drilled 17 holes to 1 against the old carbon steel. Secretary Lane's estimate of five men and five lathes is conservative.

Galvanizers Have Little Spelter

It is reported that the spelter stocks in the hands of galvanizers are low, but no immediate relief may be expected from this quarter until the steel situation improves. The brass industry reports little business and though the manufacturers have small stocks of spelter they seem well supplied with scrap brass.—Bureau of Mines Minerals Investigations.



WORLD'S LARGEST AIRPLANE FACTORY

MAKING POWER PRODUCE



MEN, material, machines, all played their part wonderfully well in winning the war. But a stream of power was back of it all in every plant. Belts were humming day and night carrying energy from the flywheel to drive shafts and distributing it to each individual machine.

It was a time when results were the first consideration. We were called upon constantly to conquer hard drives—stop power leaks—to help boost production—and Chicago Leather Belting never failed.

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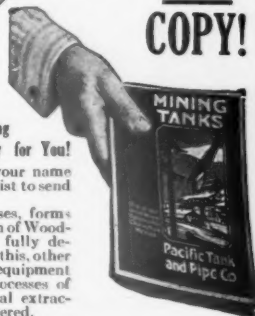
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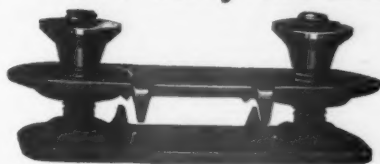
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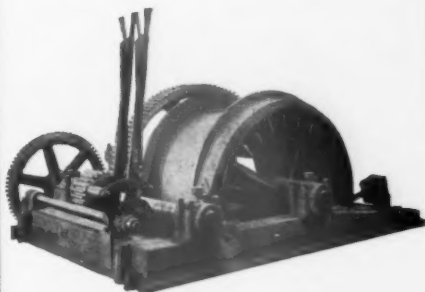
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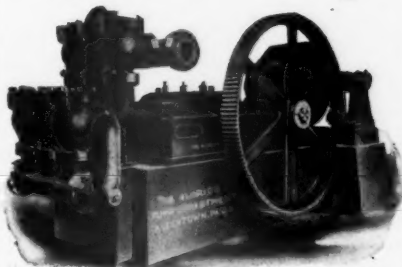
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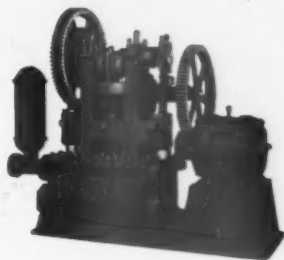


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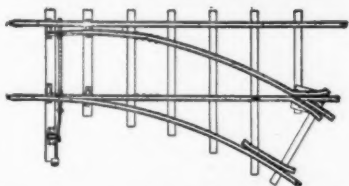
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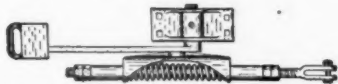
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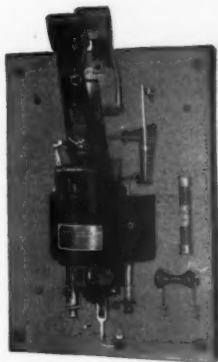
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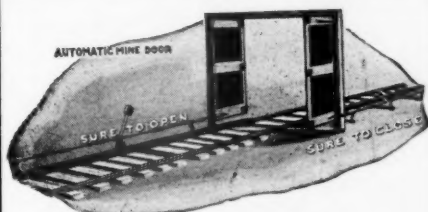
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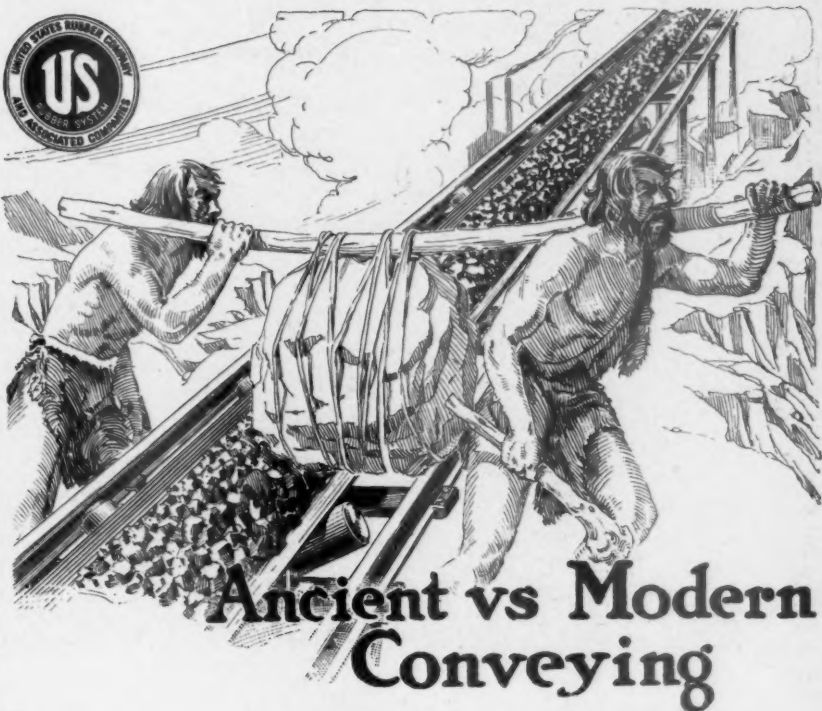
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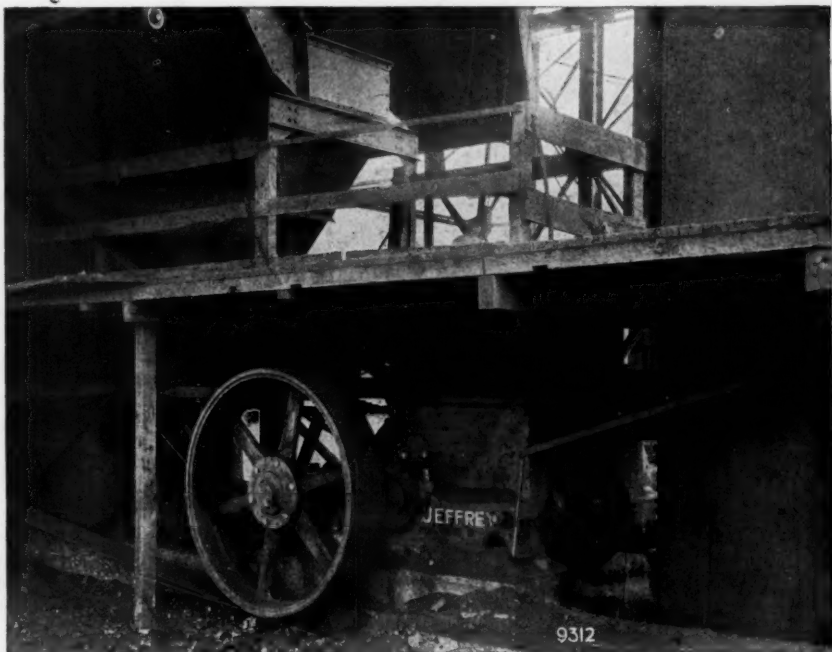
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